United States
Environmental Protection
Agency

Office of Air Quality
Planning and Standards
Research Triangle Park, NC 27711

EPA - 454/R-00-027
May 2000

Air

EPA

Hot Mix Asphalt Plants
Truck Loading
Instrumental Methods Testing

Asphalt Plant D
Barre, Massachusetts

Office of Air Quality
Clean Air
OAQPS
Planning and Standards

Hot Mix Asphalt Plants
Truck Loading
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Asphalt Plant D
Barre, Massachusetts

Final Report

For U.S. Environmental Protection Agency
Office of Air Quality Planning and Standards
Emissions, Monitoring, and Analysis Division
Emission Measurement Center (MD-19)
4930 Old Page Road
Research Triangle Park, North Carolina 27709

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EPA Contract No. 68-D-98-027
Work Assignment No. 3-02
MRI Project No. 4952-02

U.S. Environmental Protection Agency
Region 5, Library (PL-12J)
77 West Jackson Boulevard, 12th Floor
Chicago, IL 60604-3590

May, 2000

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Preface

This report was prepared by Midwest Research Institute (MRI) for the U.S. Environmental Protection Agency (EPA) under EMC Contract No. 68-D-98-027, Work Assignment Number 3-02. A draft report was prepared previously under WA 2-04. Field work to generate the data for this report was performed under OPPT Contract No. 68-W6-0048, Work Assignment No. 2-08. Mr. Michael Toney is the EPA Work Assignment Manager. The MRI Work Assignment Leader is Mr. Scott Klamm and Mr. John Hosenfeld is the MRI Program Manager on the EMC contract.

This draft report presents the procedures used and results from an emissions test using Method 25A (THC by FID) at a hot mix asphalt plant in Massachusetts.

MIDWEST RESEARCH INSTITUTE

John Hosenfeld
Program Manager

Approved:

Paul Constant
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May, 2000

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Glossary

ASTM—American Society for Testing and Materials
CAAP—Coalition Against the Asphalt Plant
DQO—Data Quality Objective
EFIG—Emission Factor and Inventory Group
EMAD—Emissions Measurement and Analysis Division
EMC—Emission Measurement Center
ESD—Emission Standards Division
FID—Flame Ionization Detector
MRI—Midwest Research Institute
NDO—Natural Draft Opening
OAQPS—Office of Air Quality Planning and Standards
PES—Pacific Environmental Services
RAP—Recycled Asphalt
RTFOT—Rolling Thin Film Oven Test
SMTG—Source Measurement Technology Group
THC—Total Hydrocarbons
TTE—Temporary Total Enclosure

Overview

Results from the Plant D testing are summarized in the table below. Total hydrocarbon (THC) concentrations were determined by Method 25A, and averaged 3.4 ppm as propane. The corresponding emission factor was calculated to be 0.00165 lb/ton of hot mix asphalt loadout. These values are averages for the three test runs, and data for the individual test runs are found below and in the remainder of this test report.

Table OV-1. Summary of Concentrations and Emission Factors

	Run 1	Run 2	Run 3	Overall average
THC average concentration (ppm)	3.1	3.5	3.6	3.4
Emission factor (lb/ton)	1.53×10^{-3}	1.71×10^{-3}	1.71×10^{-3}	1.65×10^{-3}

Section 1. Introduction

1.1 Background

The United States Environmental Protection Agency (EPA) is investigating hot mix asphalt plants to quantify particulate matter and total hydrocarbon emissions from asphalt cement load-out operations. EPA has issued a work assignment to Midwest Research Institute (MRI) to conduct an air emissions test program to collect data in support of the investigation. The testing program was conducted through EPA Contract No. 68W6-0048, Work Assignment No. 2-08, and reporting activities were conducted through EPA Contract No.68-D-98-027, Work Assignment 2-04.

The selected site, "Plant D" in Massachusetts, was selected as the host facility for this project. The plant was chosen through a cooperative effort between the EPA, the Coalition Against the Asphalt Plant (CAAP), Pacific Environmental Services (PES) and MRI.

Prior to testing at the selected site, a Total Temporary Enclosure (TTE) was constructed around the truck load-out area, thereby allowing "fugitive" emissions to be captured and measured as a "source." The TTE was built to meet criteria specified in EPA Method 204, and served the sole purpose of capturing fugitive emissions for source testing purposes.

MRI was responsible for the design, construction and operation of the TTE, above, and for testing of THC emissions by EPA Method 25A. PES was responsible for testing of particulate emissions, and discussion of this work is not included in this report.

1.2 Project Summary

The selected site was a batch asphalt plant located in Massachusetts. Prior to testing at the selected site, a TTE was constructed around the truck load-out area. The TTE was built to meet criteria specified in EPA Method 204, and served the sole purpose of capturing fugitive emissions for measurement as a point source.

Three test runs were performed to measure the load-out emissions for Total Hydrocarbon (THC) (conducted by MRI) and particulates (conducted by PES). Test runs were nominally 4-hr of sampling time, although starting and stopping of sampling activities throughout each test run created total run times of 6 hours or more. Sampling by MRI and PES was conducted simultaneously.

1.3 Project Personnel

This EPA project was administered by the Emission Measurement Center (EMC). The test request was initiated by the Emission Factor and Inventory Group (EFIG) of the Emission Standards Division (ESD), both from the Office of Air Quality Planning and Standards (OAQPS). Key project personnel are listed below in Table 1-1.

Table 1-1. Project Personnel

Organization	Name and title	Phone number
U.S. EPA EMC	Michael Toney, Work Assignment Manager	(919) 541-5247 (919) 541-1039 (fax)
Midwest Research Institute 425 Volker Boulevard Kansas City, MO 64110	Scott Klamm, Work Assignment Leader	(816) 753-7500, ext 1228 (816) 531-0315 (fax)
Midwest Research Institute 425 Volker Boulevard Kansas City, MO 64110	John Hosenfeld, Program Manager	(816) 753-7500, ext 1336 (816) 531-0315 (fax)
Pacific Environmental Services, Inc. Central Park West 5001 S. Miami Blvd. P.O. Box 12077 Research Triangle, NC 27709	Frank Phoenix, Work Assignment Leader	(919) 941-0333 (919) 941-0234 (fax)

Section 2.
Process Description and Test Locations

2.1 Process Description

The Plant D facility is a batch production plant with a normal production rate of about 150 tons/hr of hot mix asphalt. A realistic rate for a full production day is about 200 to 210 tons/hr. The facility air permit allows up to 255 tons/hr of production and is based on a production rate of 1 batch/min for 60 min.

The air permit also cites an annual production of 600,000 tons/yr. Seasonal restrictions and city-restricted operating hours (5 days/wk, 10 hr/day maximum) prohibit maximum production from being achieved. Typical annual production for the facility is about 100,000 tons.[1]

The facility normally produces asphalt in 2-5 tons/batch, performing multiple loads to fill a 25-ton or 32-ton haul truck. Individual batches are mixed as frequently as one per minute, thus taking a total of 5 to 10 minutes per truck for complete loading. The plant typically starts up around 6:30 a.m. and produces hot mix asphalt until 2:00 p.m. A simplified process flow schematic is shown in Figure 2-1.

Under normal operations a truck pulls into the load-out bay and is loaded with 20 to 32 tons of asphalt concrete in 5 to 10 minutes. The exact mix of each batch (aggregate size, etc.) is determined by the customer's request. Details of each mix are programmed into the control room computer, along with the total tonnage for the customer. Computer controls then divide the total load into an equal number of batches. A 21-ton load, for example, would likely be divided into 7 three-ton batches or 6 three-and-one-half-ton batches. Scales above the mixer pre-weigh the mix components, which usually consists of (1) hot aggregate from the dryer, (2) the hot asphalt binder from the heated storage tanks, and (3) reclaimed asphalt from the cold storage bins. When the first batch is ready, the mix components are dropped into the mixer. Mixing usually takes about one minute. When mixing is complete, the hot asphalt concrete is dropped (i.e., loaded) into the transport truck waiting in the load-out bay under the mixer. While the first batch is in the mixer, the scales are loaded with a second batch. Just after the first batch is loaded, the second pre-weighed batch is dropped into the mixer. The process continues until the entire load is

[1] Plant production and air permit information obtained from telephone conversation with the Vice President of Engineering and Production, Plant D.

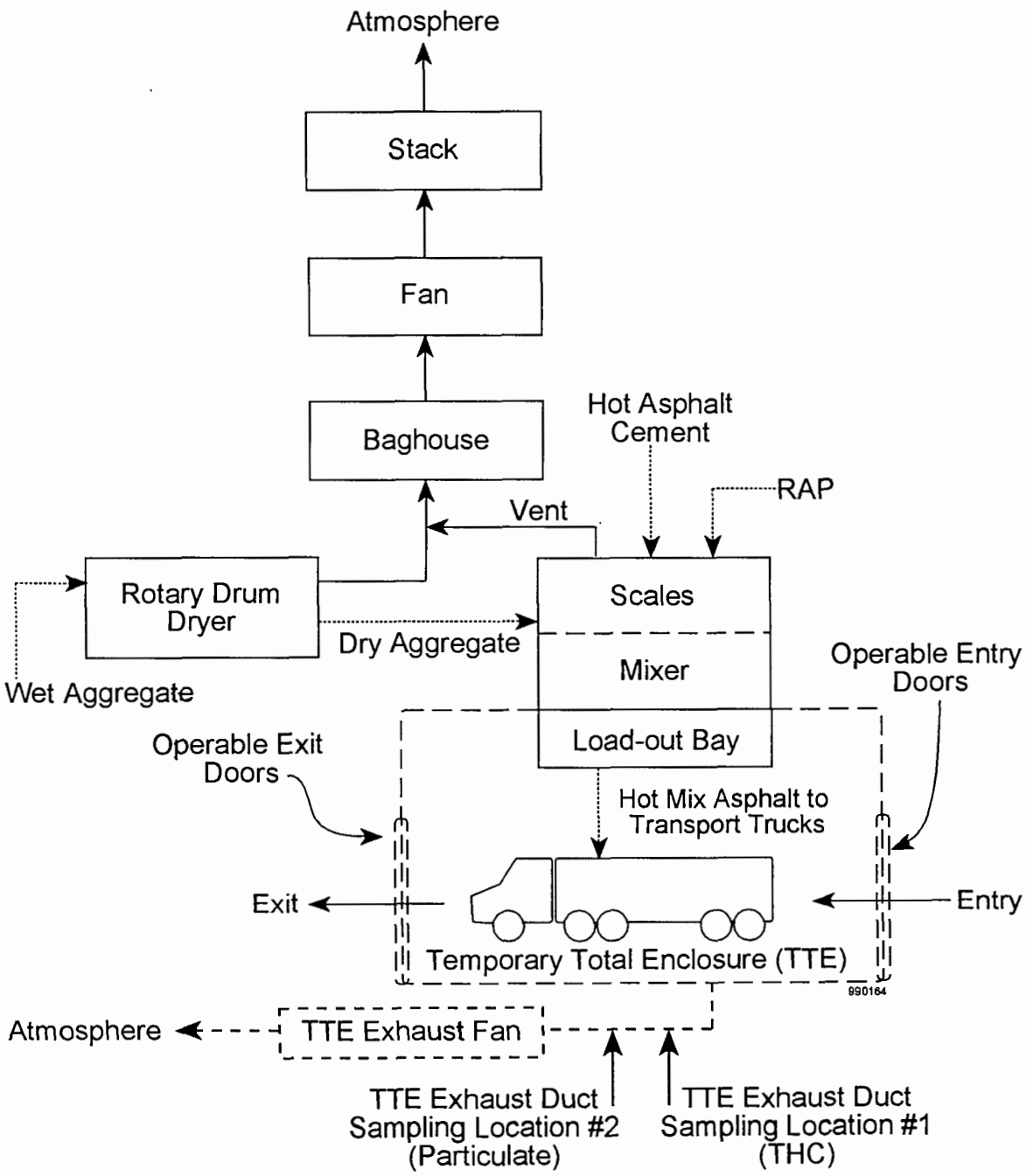

Figure 2-1. Process Flow Schematic

mixed and loaded into the transport truck. From beginning to end, the entire process takes about 5 to 10 minutes, depending on the size of the load.

The asphalt temperature as it drops from the mixing chamber to the truck is normally about 300°F. For these tests, however, asphalt temperatures were raised from 300°F to 325°F.

Specifically for this project, a TTE was built around the loadout area. The TTE was built to meet the requirements of EPA Method 204. Fumes from the asphalt load-out were captured using a hood or "tuning fork" over the truck bed. Gases were withdrawn from the TTE along a short length of duct where samples were collected. A stack vented the exhaust gases clear of the area. Nominal airflow through the TTE was 14,000 to 16,000 acfm. To minimize roadway dust in and around the TTE, the roadway was periodically sprayed with water.

During the testing, PES personnel monitored and recorded process operations and measured the temperature of the hot mix asphalt just after load-out. This information is presented in Appendix E and includes for each load: the time of the load, the job number, the truck number, the mix typed, the ticket number, the mix temperature, the stack temperature, the asphalt temperature, and the tons of asphalt concrete loaded. Note that the mix temperature was the temperature of dried aggregate leaving the dryer, the stack temperature was the temperature of the exhaust gas in the baghouse stack, and the asphalt temperature was the temperature of hot mix asphalt in the bed of the truck just after load-out. This information is summarized later in Section 4, Table 4-1. Also included in Appendix E are copies of the plant logs for each batch loaded. These logs show the weights for each mix component for each production batch.

2.2 Test Locations

Figures 2-2 and 2-3 show the TTE and ventilation system design. Finished product from the batch mixer is loaded out through the central drop chute. A header located around the drop chute captured emissions during load-out. An induced draft fan pulled the captured emissions through duct work equipped with sampling ports before emissions were vented to the atmosphere. The sampling duct was a 24-in x 24-in square duct with 3-in sampling ports as shown. Appendix A contains a series of pictures of the actual TTE at the field location.

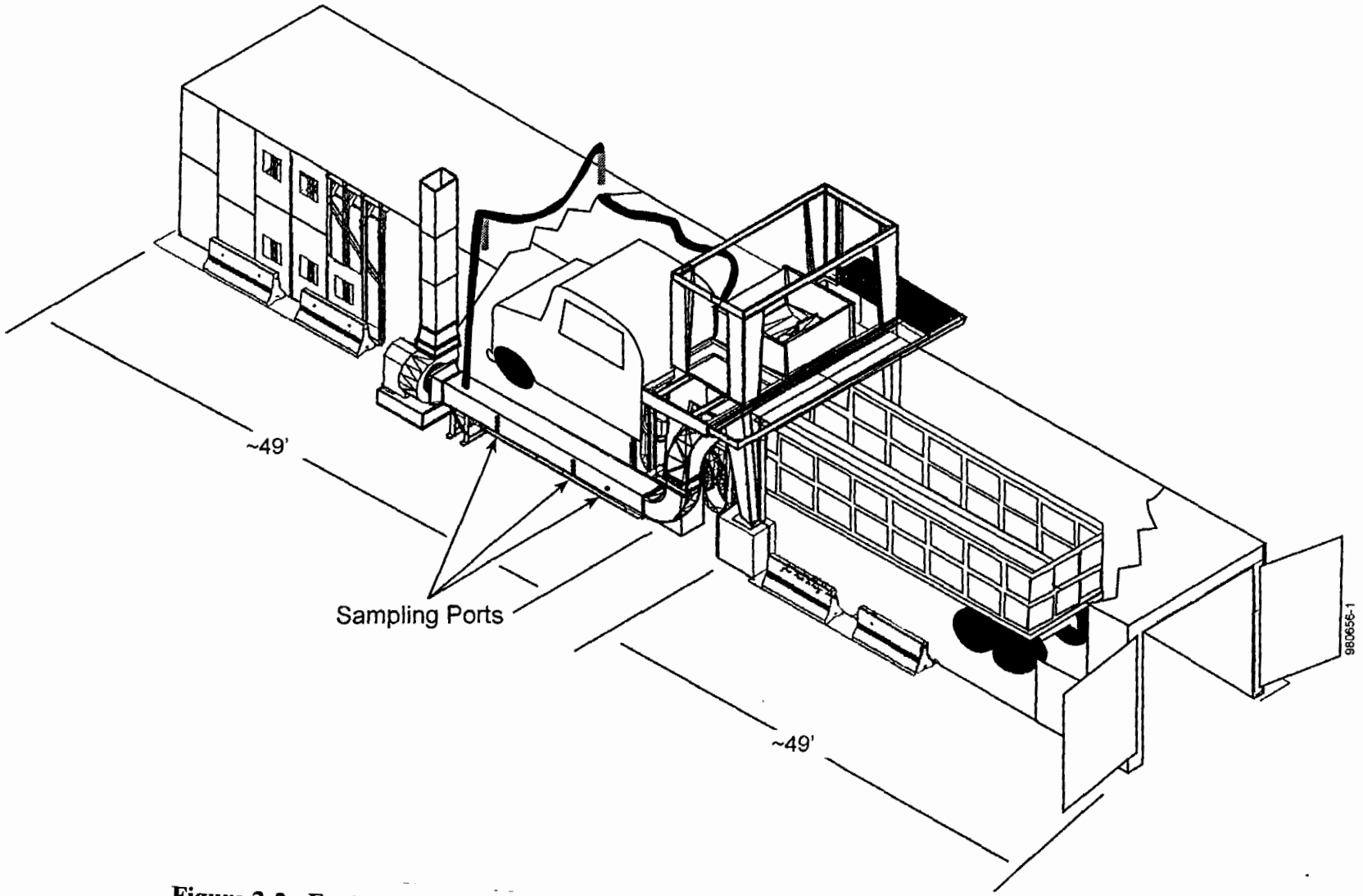

Figure 2-2. Fugitive Emission Capture System (Total Temporary Enclosure, or TTE)

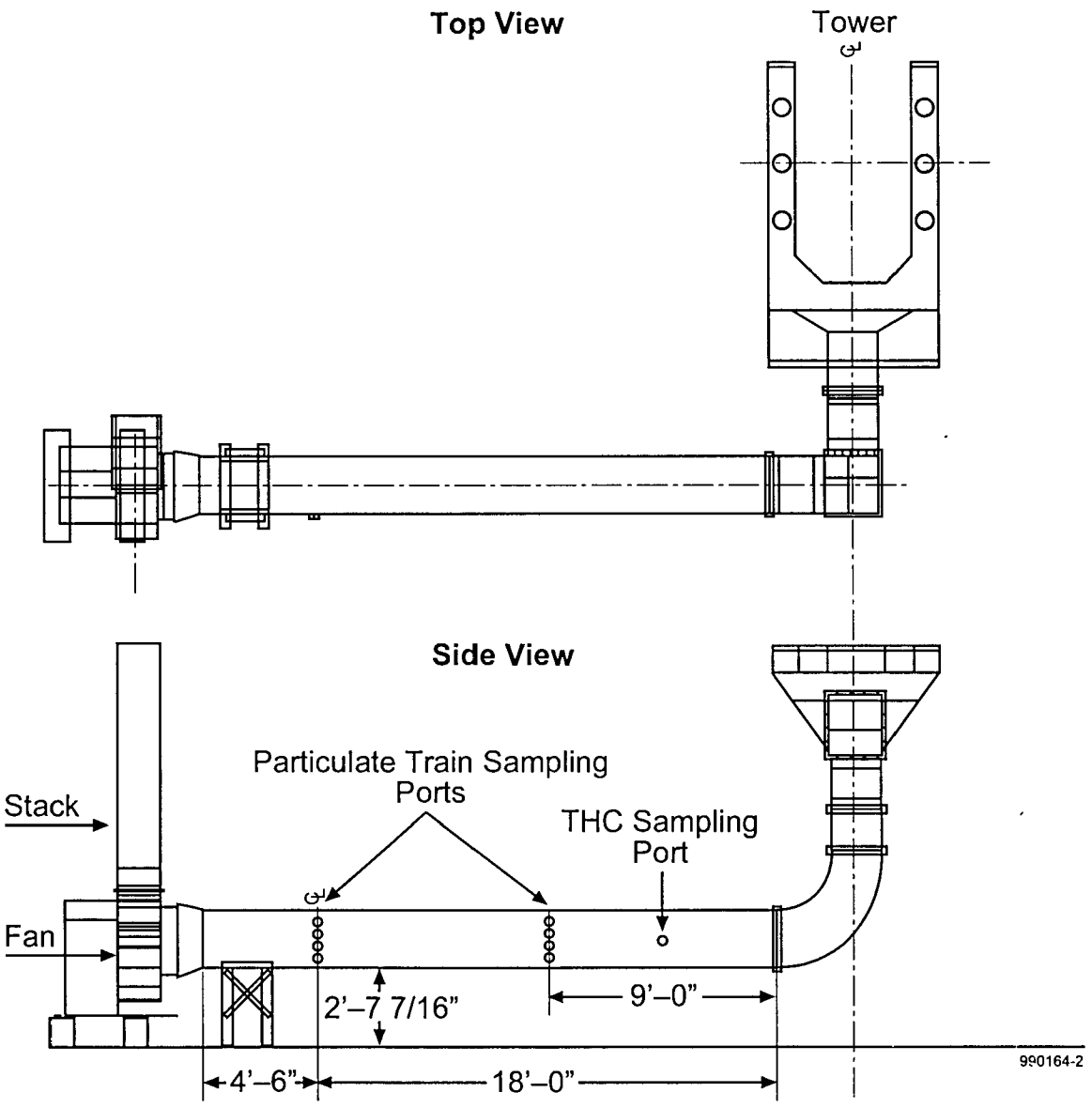

Figure 2-3. Hood and Duct System

Section 3.
Test Procedures

3.1 Sampling System Description

MRI's personnel operated a sampling system (Figure 3-1) that transported sample gas through heated Teflon® lines. The sample stream passed through a gas manifold that distributed sample to the total hydrocarbon analyzer. Manual measurements of gas temperature, flow rates, and moisture were performed by PES, who provided the data to MRI for determination of mass emission rates.

Sample was extracted through a single port using a 0.5-in diameter stainless steel probe fitted with a glass wool filter. The sample line was heat wrapped and insulated. Temperature controllers were used to monitor and regulate the sample line temperature at 275°F.

For the load-out testing, the TTE exhaust duct was continuously sampled for total hydrocarbons (THC) by EPA Method 25A using a flame ionization detector (FID). Sample gas was withdrawn from the duct by a heated sample line which connects to the analyzer. Analyzer results were integrated and logged once per minute, at a minimum. As time and conditions allowed, additional tests at higher integration speeds were also performed (once/10 sec and once/sec).

The following instruments checks were made for each test run:

- Zero and span calibration check
- Instrument drift
- Instrument linearity

Sample gas was analyzed with a flame ionization detector and results were recorded as ppm propane. Instrument response times were measured daily and showed a 12-17 second response time.

3.2 Sampling Procedures

Three test runs were performed at the rate of one run per day. Tests were nominally 4 hrs of sampling time, but took about 6 hrs to execute, due to the start/stop nature of the testing. MRI's portion of the testing included operation of a THC analyzer by Method 25A, and operation of the TTE. Certain process parameters were also logged to allow determination of emissions based on load-out rate.

Operation of the TTE consisted primarily of (1) closing doorways following truck entrance; (2) connecting "elephant trunk" hoses to truck exhausts (to eliminate vehicle exhausts as an emission source); (3) allowing airflows within the TTE to stabilize; (4) conducting load-out emissions test for a single truck; and (5) opening doorways to allow the truck to exit and a new truck to enter. The exact execution of each of these steps depended somewhat on actual field conditions encountered, but essentially went as follows:

1. Close doorways following truck entrance—Once a truck reached its initial loading position, doorways on both ends of the TTE were closed. Airflow was thus restricted to the remaining Natural Draft Openings (NDOs) in the design.

2. Connect "elephant trunk" hoses to truck exhausts—In order to eliminate vehicle exhausts as an emission source, exhaust hoses were connected to the truck exhausts. Haul trucks at the facility typically had single exhausts beside the cab, although some had dual exhausts. As necessary, trucks with exhausts which could not be adapted to the "elephant trunk" hoses were bypassed, and not included in the testing, or were marked as unable to be exhausted on the process log sheets.

3. Allow airflows within the TTE to stabilize—Visual observation of the streamers attached to the top and bottom of the doors indicated inward airflow. About 5-10 seconds were required for streamers to reach "standard" air flow conditions.

4. Conduct emissions test—THC measurements were collected during the load-out cycle for each truck.

5. Open doorways following emissions test—Approximately 15 sec following the final load-out drop, the TTE doors were opened to allow the truck to exit and a new truck to enter. The "elephant trunk" exhaust hoses were disconnected prior to the truck movement.

A log of the hot mix asphalt process was also kept during the testing. The facility is a batch processing plant, and the specific parameters logged included:

- Time of batch loadout
- Size of batch (tons)
- Aggregate type and quantity (if available)
- Liquid asphalt cement type and quantity (if available)
- Additive type and quantity (if available)

Section 4.
Test Results

The following sections contain the results from the testing. Section 4.1 summarizes the emissions and process data, and Section 4.2 describes the changes and modifications to the Test Plan.

4.1 Summary of Results

Table 4-1 summarizes the test matrix for the data collection effort. Three test runs were performed at the rate of one test per day. Tons of loadout were nominally 900 tons/day. THC emissions data were collected continuously throughout each test run, although the data set was adjusted later to eliminate those time periods in which no truck loading occurred, the instrument was being calibrated, etc. Appendix B contains the adjusted continuous emissions data and calibration summaries for the THC monitor. Original raw data (prior to stripping out extraneous data) is on file at MRI.

Table 4-2 summarizes the test results. Average THC emissions were calculated for each run, as well as the maximum and minimum for each run. The average concentration for the three runs was fairly consistent, falling between 3.1 and 3.6 ppm. High concentrations for the three runs ranged from 7.7 to 8.3 ppm. Prior to beginning Run 2, ambient air concentrations were monitored, and were found to be 0.0 ppm.

Using exhaust gas flowrates determined by PES (Appendix C), THC concentrations were converted to mass emissions (g/min and tons/yr). Average emission rates were quite consistent between the three test runs, and averaged 2.5 g/min (approximately 0.33 lb/h). Emission rates for the minimum and maximum were also calculated, and were based upon the instantaneous minimum or maximum concentrations being emitted for the entire length of the test.

Using only the asphalt loadout tons for the time periods in which THC data were collected (Appendix D), emission factors in pounds of THC emitted per ton of asphalt loadout were generated. Emission factors ranged from 0.00153 to 0.00171 lb/ton for the three tests performed. Raw loadout data and summary sheets are contained in Appendix E.

Table 4-3 summarizes the production data for the three test runs. For each of the test runs, a single mix type accounted for approximately 80% or more of the daily loadout tonnage. These specific mixes were Mix No. 30 (State Binder 10% RAP), Mix No. 24 (Modified Top 10% RAP), and Mix No. 25 (State Top 10% RAP), for Runs 1, 2, and 3, respectively.

Figures 4-1 through 4-3 contain time plots of the THC data (1-min averaging) for the three test runs. Figure 4-4 contains a time plot of the data collected using 1-sec averaging, and is included to illustrate the true time resolution of the loadout emissions for each complete batch mixing cycle. Below the 1-sec averaging data are time plots for 10-sec and 1-min averaging using the same data set, thus visually illustrating the conversion between the various averaging techniques. Again, 1-min averaging was used throughout the test series, except for a few brief time periods such as these illustrations, due to the limitations for field operation of the THC, the data collection software, and the data logging/storage system.

At seven different times during the test program, an "extended period" test was performed. These tests were performed at times where there was a brief lull in loadout operations, and the loaded truck could remain in place under the silo for several minutes. Continuous monitoring for THC emissions continued through these time periods, allowing some indication of the "tail-off" rate of emissions from a loaded truck. Table 4-4 shows the results from these measurements.

Table 4-4 also attempts to show a "final emission rate" for trucks which have been loaded and are awaiting departure. This calculation assumes that the "final concentration" from the extended period test remains a constant emission, and that the volumetric air flow rate of the capture hood can be used to calculate a mass emission rate. In the first case, the "final concentration" is likely a high value, since time limits did not allow further measurement of the concentration decay (especially for the single 3-min period). In the second case, a volumetric flow rate of approximately 14,000 dscfm (400 dscm/min) across the loaded truck bed likely increased air concentrations of the asphalt fume above levels expected from a stationary truck in open air (i.e., induced mass transfer due to convection).

4.2 Field Test Changes and Problems

For the most part, the field testing effort and operation of the TTE went smoothly and without incident. As with any field program, however, the uncertainties of field testing did contribute to some minor changes from the Test Plan, as explained below:

1. Due to difficulties in venting the exhausts from certain individual trucks and the limited production schedule of the facility, the original plan to test only those trucks whose exhausts could be vented was abandoned in order to sample the maximum number of trucks (maximum length of sampling run). The number of trucks which could not be vented was very minimal (2, 2, and 6 for Runs 1, 2, and 3, respectively), and removing these emissions from the data set had only a minor effect on the overall averages. Thus, the final reported data includes all trucks, both vented and unvented.

2. Due to the length of time required to secure the TTE following truck entrance, attach the exhaust vent lines, and initiate manual sampling, the first loadout drop for a batch was occasionally missed. Since these emissions were not included in the measurements, the tonnage of the first drop was also subtracted from the loadout total. Thus, the reported emissions and loadout tonnage correspond exactly to the monitored time intervals, and do not bias the data set high or low.

3. During the first test day (October 5), occasional high winds were gusting directly down the TTE from the exit towards the entrance, creating time periods of lower face velocity at the truck entrance. Measurements were taken with a hand-held velometer, and indicated that the minimum airflow criteria of > 200 fpm was maintained. To minimize potential problems during Runs 2 and 3, however, an additional 9" of open space across the top of each doorway was closed, reducing the original 18" open space to about 9" across the full width of each doorway. This change had no noticeable effect upon the total airflow or other operations of the TTE. Note also that total airflow was slightly reduced for Runs 2 and 3 in order to help minimize the effects of dilution air upon the sample concentrations.

4. Due to the high sensitivity of the instrumentation and the fairly rapid fluctuations in field conditions, the delta P gauge for measurement of TTE pressure did not prove to be useful. Under field conditions, stable delta P readings proved to be very difficult to obtain for the individual opening/closing activities of the TTE. Measurements for minimum airflow of >200 fpm, however, were collected using a hand-held velometer, verifying that the TTE met Method 204 criteria. Inward airflows of 300-550 fpm were measured on the upwind end of the TTE, while airflows of 250-350 fpm were measured on the downwind end. Plastic streamers were also attached to openings at the top and bottom of each doorway to provide a visual indication of airflow into the TTE.

5. In an effort to minimize sample dilution, the overall airflow into the TTE was reduced slightly following Run 1, and again following Run 2. This action allowed both the THC analyzer (MRI) and particulate sampling (PES) to gain the best detection limits and most accurate data.

Table 4-1. Test Summary

Run	Date	Total time	Total loadout (tons)	RTFOT Results (%)[a]	Avg. asphalt temp. at load-out[b] (°F)	Avg. mix temp. (°F)	Measure-ments collected
1	10/5/98	0721-1403	915	-0.204	307	379	THC (Method 25A)
2	10/6/98	0714-1326	916	-0.246	325	395	THC (Method 25A)
3	10/7/98	0636-1313	857	-0.261	327	380	THC (Method 25A)

[a] Average value obtained from PES as per ASTM method D2872-88.
[b] Directly measured in loaded trucks. Data obtained from PES.

Table 4-2. Summary of Results

	Units	Run 1	Run 2	Run 3
Date	–	10/5/98	10/6/98	10/7/98
Total Time for THC Sampling[a]	min	220	243	258
THC Concentration (as Propane)				
Average	ppm	3.1	3.5	3.6
Minimum	ppm	1.2	0.5	0.7
Maximum	ppm	8.3	7.7	8.2
Exhaust Gas Conditions[b]				
Average Temperature	ºF	60	58	55
O_2 Concentration	%	20.9	20.9	20.9
CO_2 Concentration	%	0.0	0.0	0.0
Moisture	%	0.7	0.4	0.7
Volumetric Flow Rate	acfm	15,350	14,150	13,450
Volumetric Flow Rate	acm/min	435	401	381
Emission Rate (as Propane)				
Average	g/min	2.5	2.5	2.5
Minimum	g/min	1.0	0.4	0.5
Maximum	g/min	6.6	5.7	5.7
Emission Rate (as Propane)				
Average	lb/h	0.33	0.34	0.33
Minimum	lb/h	0.13	0.05	0.07
Maximum	lb/h	0.87	0.76	0.76
Total THC, as Propane, Released	lb	1.2	1.4	1.4
Total Asphalt Loaded During Sampling	tons	779.4	811.2	848.6
Emission Factor	lb/ton	0.00153	0.00171	0.00171

[a] Total THC sampling time after subtraction of off-line periods and periods without truck loading.
[b] Obtained from data collected by PES (Appendix C).

Table 4-3. Summary of Production During Each Run

	Mix type	Mix no.[a]	Total weight loaded (lb)	Total weight loaded (tons)[b]	Percentage of total
Run 1					
	½ inch binder	2	31,894	15.9	2.0
	Binder mix	8	8,151	4.1	0.5
	State dense top	16	48,150	24.1	3.1
	State binder with 10% RAP	30	1,450,372	725.2	93.0
	Sidewalk	67	20,149	10.1	1.3
			1,558,716	779.4	
Run 2					
	Binder mix	8	80,663	40.3	5.0
	State dense top	16	136,127	68.1	8.4
	Modified top with 10% RAP	24	1,318,855	659.4	81.3
	3/8 inch top	33	66,745	33.4	4.1
	Sidewalk	67	20,014	10.0	1.2
			1,622,404	811.2	
Run 3					
	½ inch binder	2	32,121	16.1	1.9
	State dense top	16	144,531	72.3	8.5
	State binder	18	30,211	15.1	1.8
	State top with 10% RAP	25	1,351,911	676.0	79.7
	State binder with 10% RAP	30	48,358	24.2	2.8
	3/8 inch top	33	72,144	36.1	4.3
	People's top	60	17,966	9.0	1.1
			1,697,242.0	848.6	

[a] Mix formulae for the various mix numbers can be found in Appendix E.
[b] Calculated from load-out during time periods of THC monitoring.

Table 4-4. Extended Period Test Results

Run no.	Times	Elapsed time (min)	Load-out (tons)	Initial conc. (ppm)	Final conc. (ppm)	Final emission rate (g/min)	Final emission rate (lb/h)
2	10:47-10:53	6	24	3.4	2.1	1.6	0.21
	12:02-12:09	7	33	3.2	1.5	1.1	0.15
	13:33-13:38[1]	5	24	4.8	1.0	0.75	0.10
	13:33-13:38[2]	5	24	3.5	1.0	0.75	0.10
3	7:21-7:27	6	33	4.3	2.4	1.7	0.23
	8:56-8:59[3]	3	10	3.3	2.8	2.0	0.26
	10:39-10:45	6	33	3.0	2.1	1.5	0.20
	13:09-13:15	6	33	2.9	2.1	1.5	0.20
		Average (including 3 min sampling period) =				1.4	0.19
		Average (excluding 3 min sampling period) =				1.4	0.18

[1] Data set was collected using 10-sec averaging, rather than the normal 1-min averaging.
[2] Data set uses 1-min averaging, and was calculated from the 10-sec averaging data set (above).
[3] Extended period is only three minutes and thus the final concentration may be biased high.

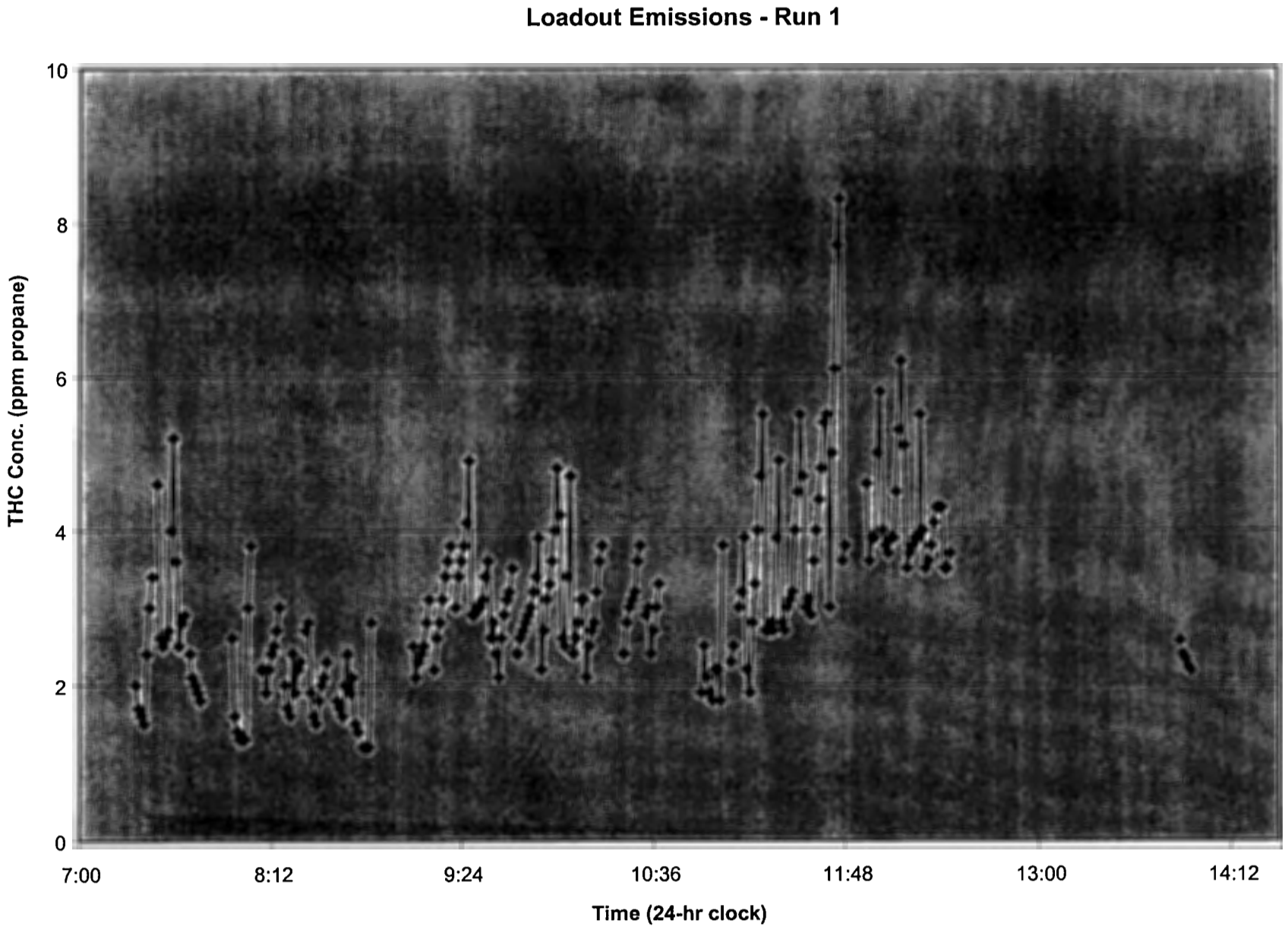

Figure 4-1. Run 1 Loadout Emissions

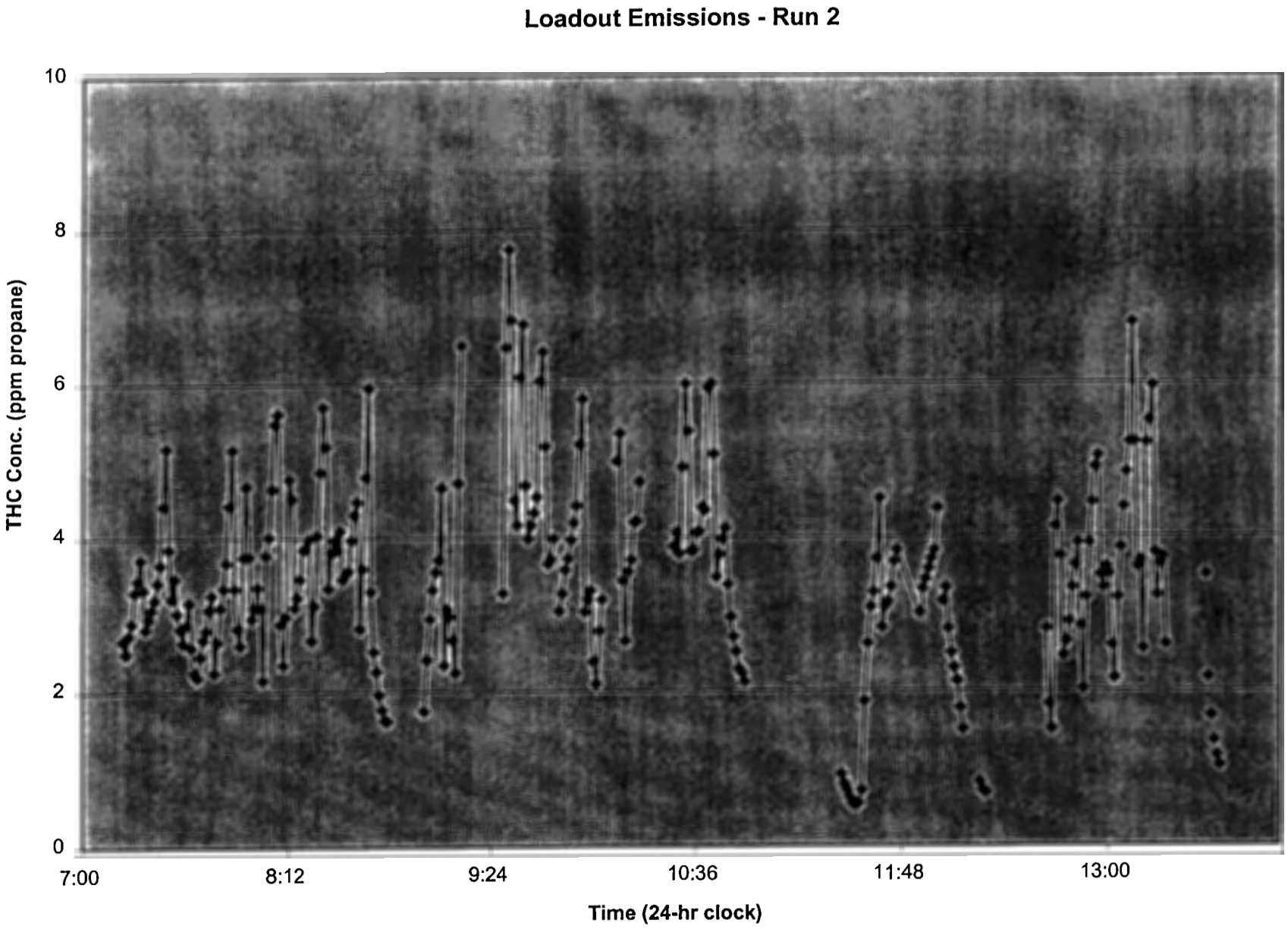

Figure 4-2. Run 2 Loadout Emissions

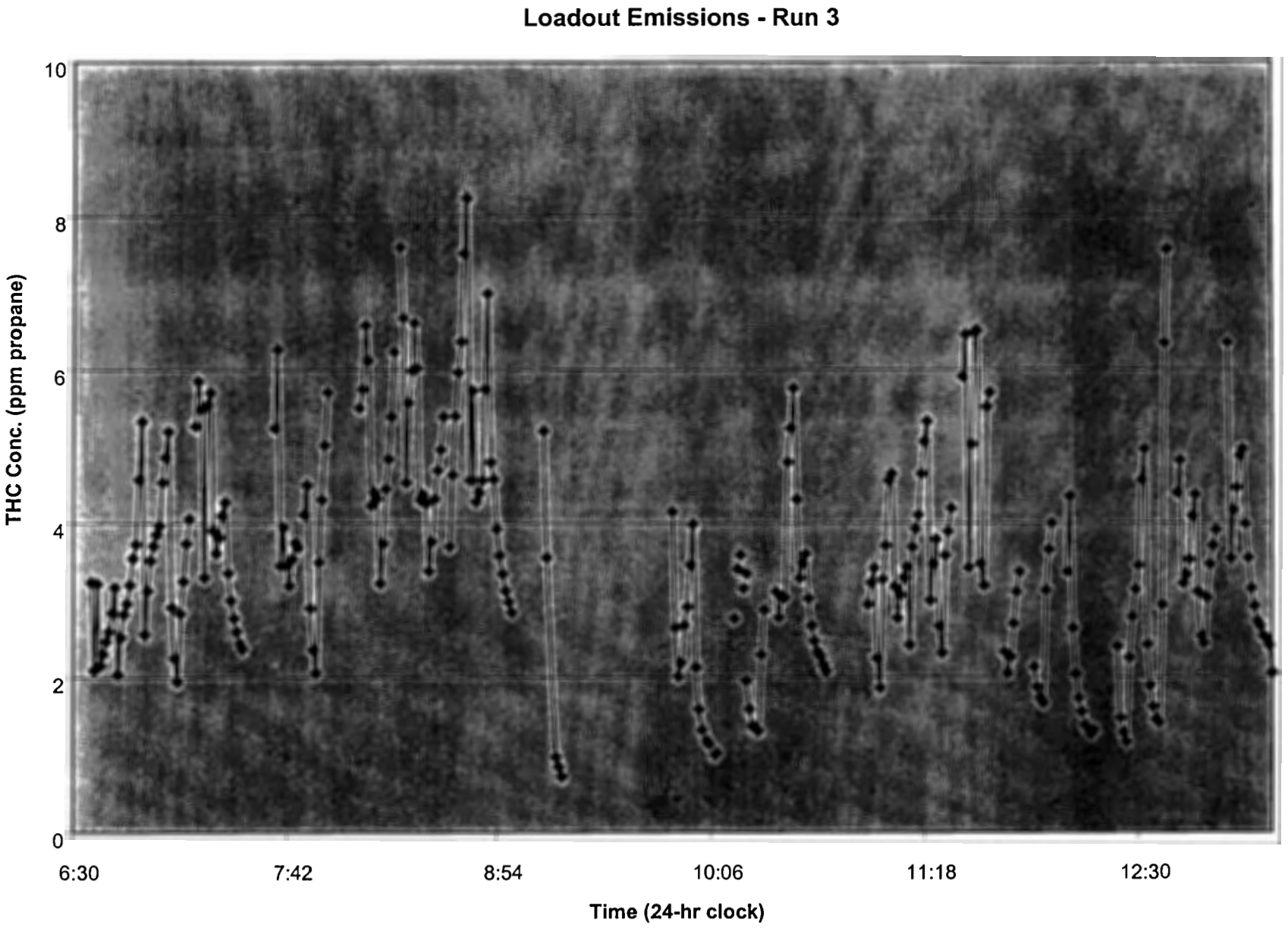

Figure 4-3. Run 3 Loadout Emissions

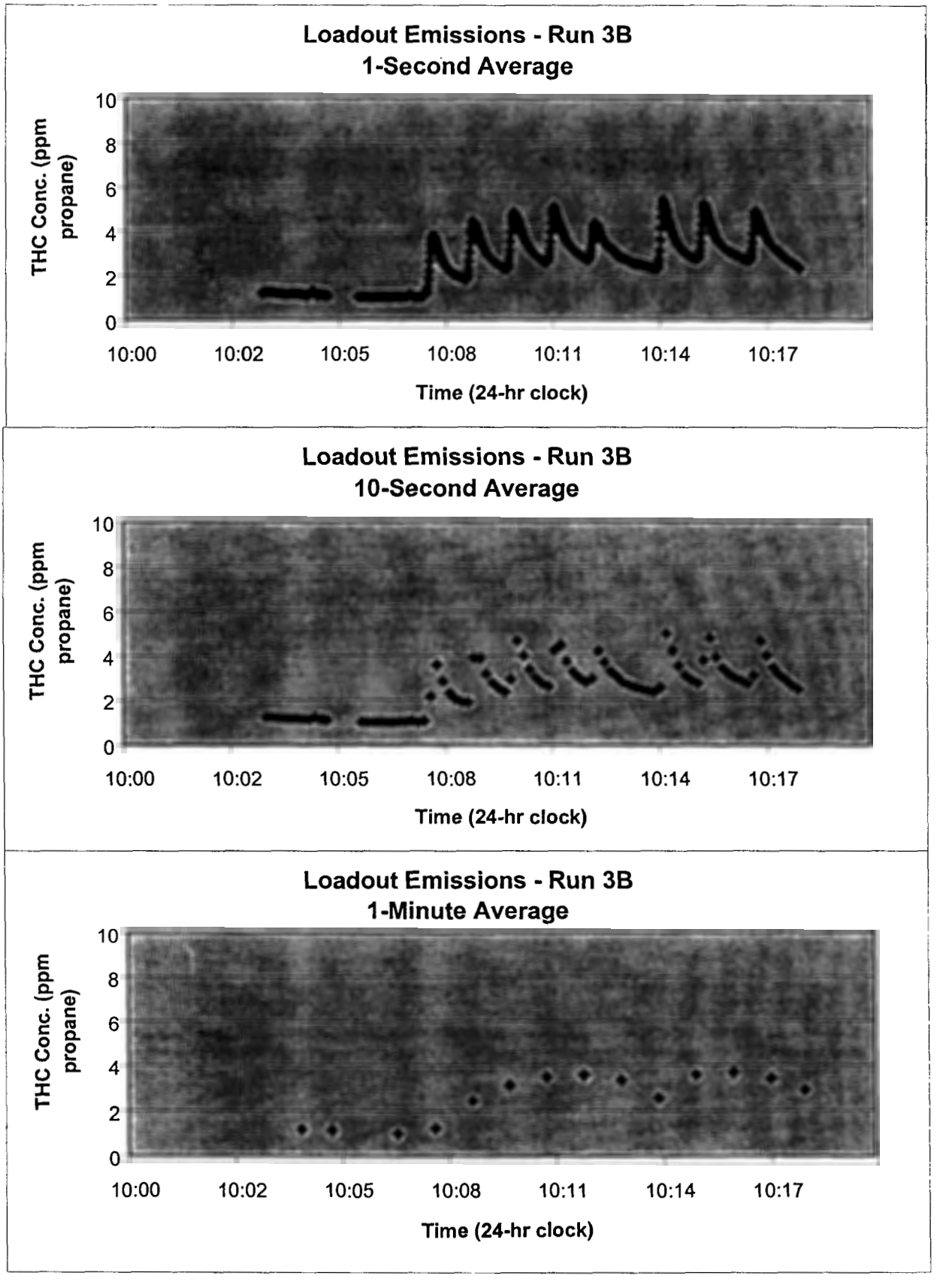

Figure 4-4. Run 3 Time Plots

Section 5.
Quality Assurance (QA)/Quality Control (QC) Activities

The QA/QC procedures and DQOs for this test program are presented in this section. The QC procedures specified in the EPA methods and MRI standard operating procedures were used for this test program. These procedures included, but were not limited to, (1) sampling equipment calibrations and, (2) procedural elements of the methods, such as leak checks. The performance and results of all QC procedures was recorded on appropriate forms, data sheets, field and laboratory notebooks, or computer media.

5.1 Sampling and Test Conditions

5.1.1 THC Sample Handling

Prior to field use, sample lines were checked for leaks and cleaned by purging with moist air (250°F). Following this, the lines were checked for contamination using dry nitrogen. This was done by heating the sampling lines to 250°F, purging with dry nitrogen, and observing no response.

5.1.2 THC DQOs

Specific QA/QC procedures were followed to ensure the continuous production of useful and valid data. Table 5-1 presents a summary of specific criteria for assessing overall measurement data quality for the methods being used. As the summary tables in Appendix B show, the THC analyzer met all method QA criteria for the three test days.

5.2 QA/QC Checks for Data Reduction and Validation

All data collected at the test site were reviewed by the Field Team Leader on a daily basis to verify that all data and information were recorded properly. Data were checked for accuracy of transfer of raw data, accuracy of calculations, and completeness. A final review was performed after all test results and supporting data were compiled into the draft report.

Table 5-1. Criteria for the Methods Being Used

Test parameters	Matrix	Method of determination	Frequency	Accuracy objective	Precision objective
THC by continuous emission monitors	Stack gas emissions	Linearity test (analysis) EPA Protocol No. 1 certified calibration gas	Used directly as calibration gases or to verify accuracy of calibration for non-EPA certified gases	±5%	NA
		Sampling system bias check (analysis of zero and calibration gas at end of sampling probe)	After initial calibrations	±5%	NA
		Zero and calibration drift tests	Performed immediately following each run and after sampling equipment adjustments during a test run	NA	±3% of initial reading
		Response time	Once per test program	NA	NA

This review included:

- Verifying the completeness of records and data relative to the emissions test and test objectives.
- Assessing the validity of the analyses relative to the QC data (e.g., calibrations, dynamic spiking, challenges with standards, etc.) generated during the sampling and analyses versus QC acceptance criteria.
- Ensuring the accuracy and traceability of the data by assessing representative test data for one complete test run. Reported test results will be verified from sampling through analysis and calculation of derived values (e.g., stack emission rates).
- Reporting and assessing the impact of any outlier or protocol modifications.

5.3 Sample and Data Handling and Custody Procedures

The MRI Field Team Leader had overall responsibility to ensure all MRI data are accounted for and that proper sample custody procedures are followed. Note that chain of custody records were not necessary because the field team was analyzing their samples at the test site.

Field measurements (e.g., temperature, flow measurement, continuous monitoring, etc.), sampling and analysis data, and process data that were recorded directly into field logbooks,

project data forms, or electronic computer data files were identified with the following information:

- Project number
- Test/run number
- Source and measurement or sampling location
- Date(s) of measurements, sampling, or analysis operation(s) as appropriate
- Time(s) of measurements, sampling, or analysis operation(s) as appropriate
- Sampler's, operator's, or analyst's name and signature or initials

Traceability, defined as a mechanism providing the ability to reconstruct the original sampling and analysis data and how it was used to generate the test results, included the following:

- Identification and calibration of measurement and test equipment used to collect or analyze samples.

- Use of MRI-issued project record books or equivalently identified data collection forms.

- Source, purity, and preparation of standard reference materials used in quantitative or qualitative analysis.

- Incorporation by reference or full description of methodologies and technically necessary modifications performed.

- Sequence (i.e., time, date, and order) that samples were collected, processed or analyzed.

- Unique identification and cross-reference of samples.

- Identification of personnel performing the work.

Traceability information was documented with all relevant data.

Appendix A

Photos of TTE Construction and Operation

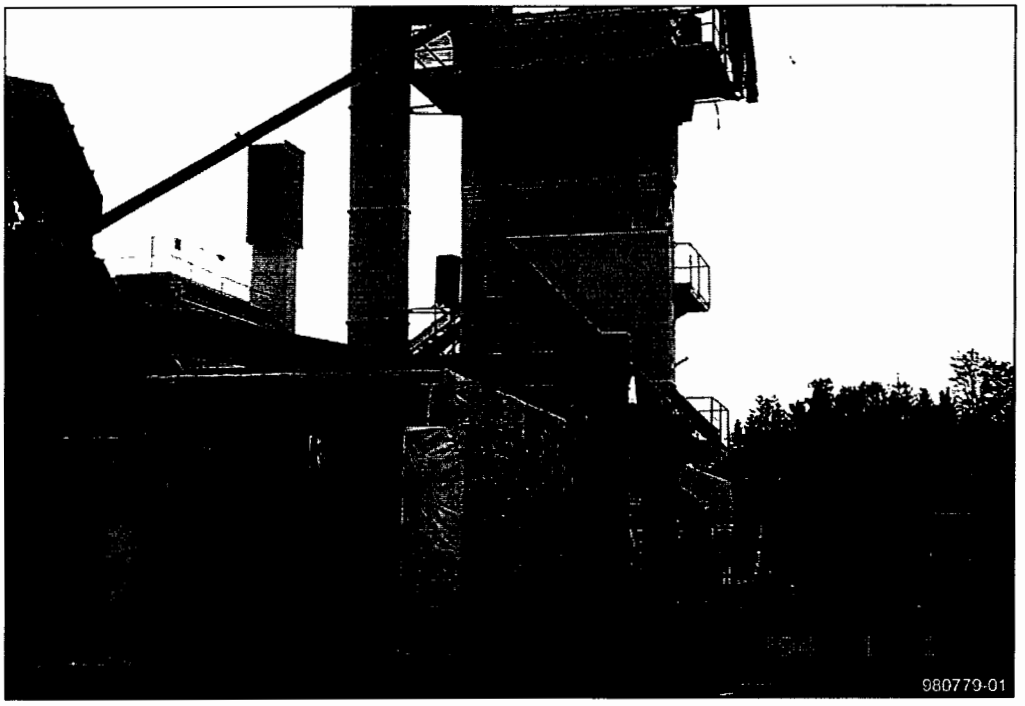

Figure 1. Overall View with Exit Doors Open

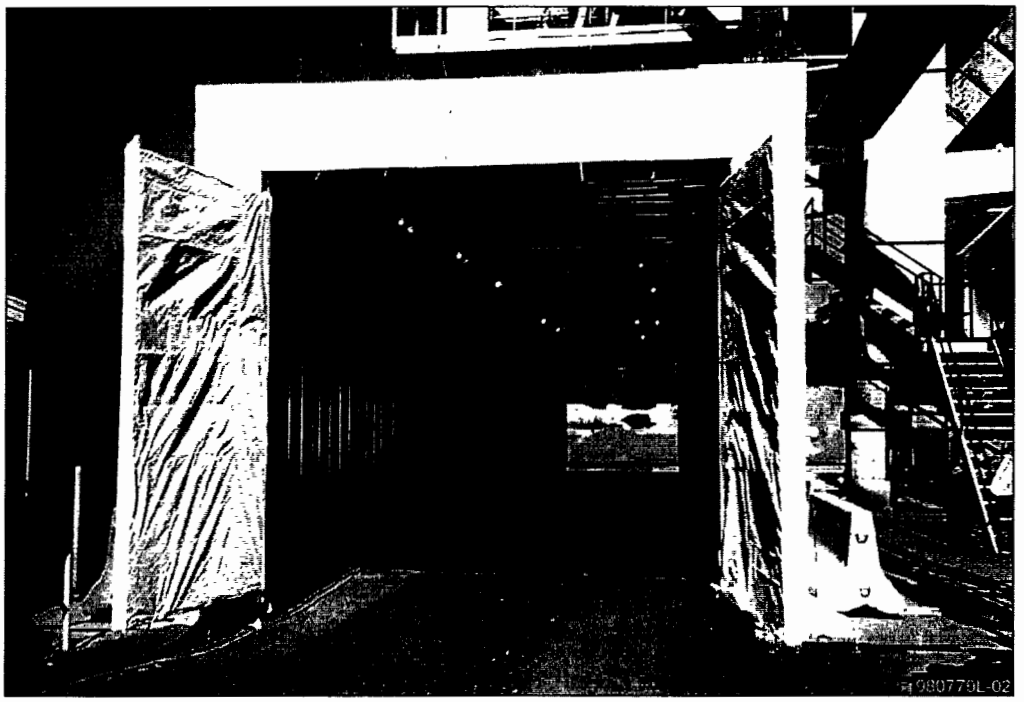

Figure 2. Empty Tunnel with Entry Doors Open

Figure 3. Empty Tunnel with Capture Hood/Loadout Chute in Center

Figure 4. Empty Tunnel with Doors Open

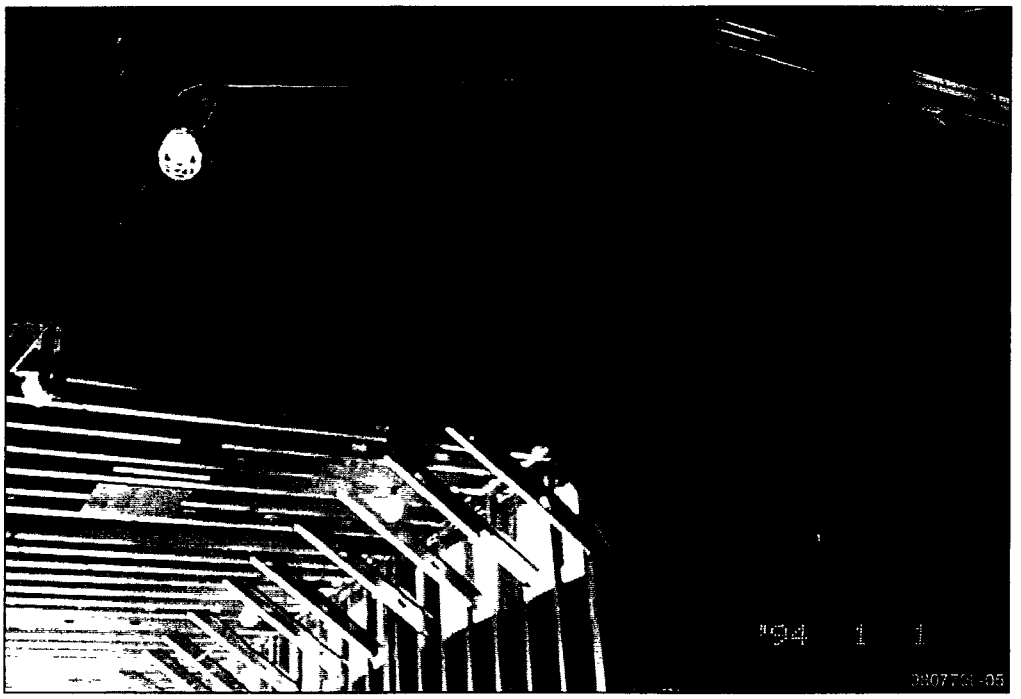

Figure 5. Fume Capture Hood

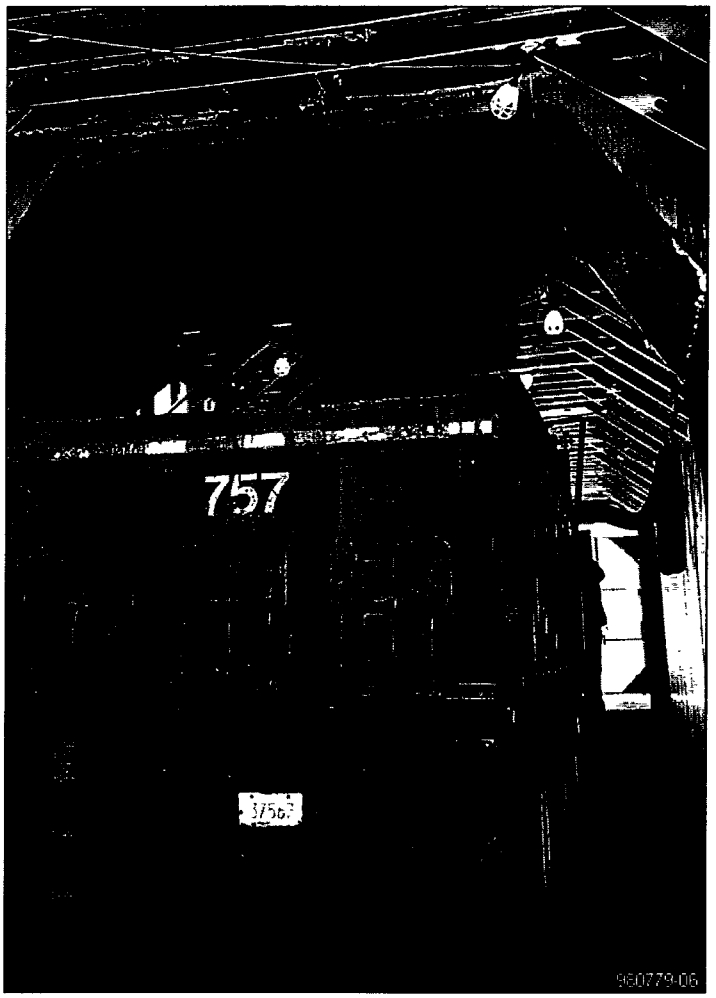

Figure 6. Truck Loading Operations with Fumes Being Captured by Hood

Figure 7. Truck in Loadout Position - Exhaust Hose Connected

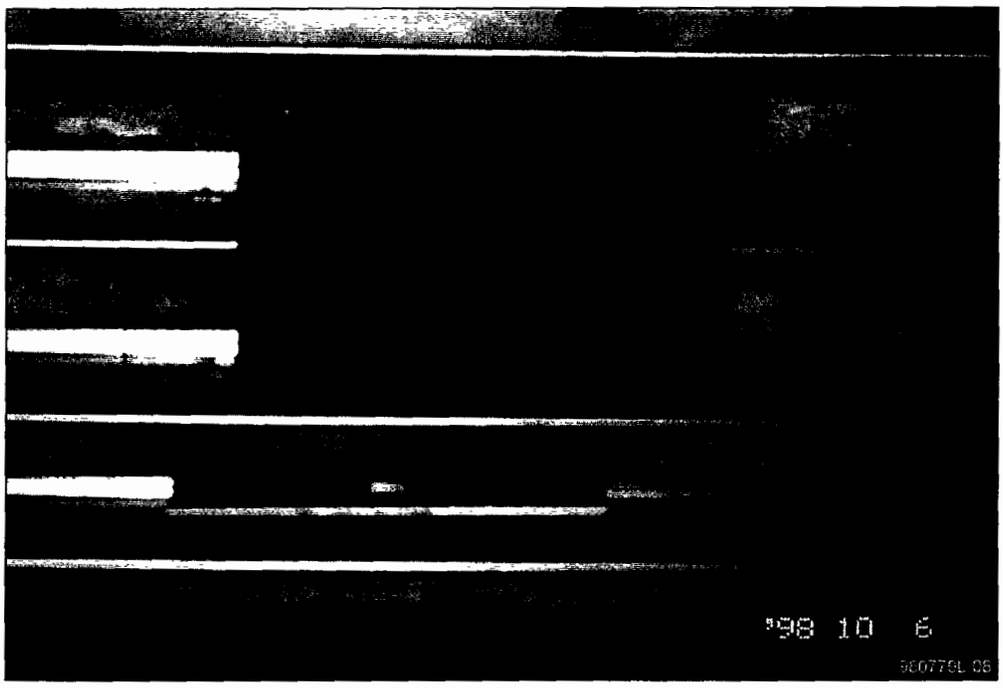

Figure 8. Close-up of Deposition Plates

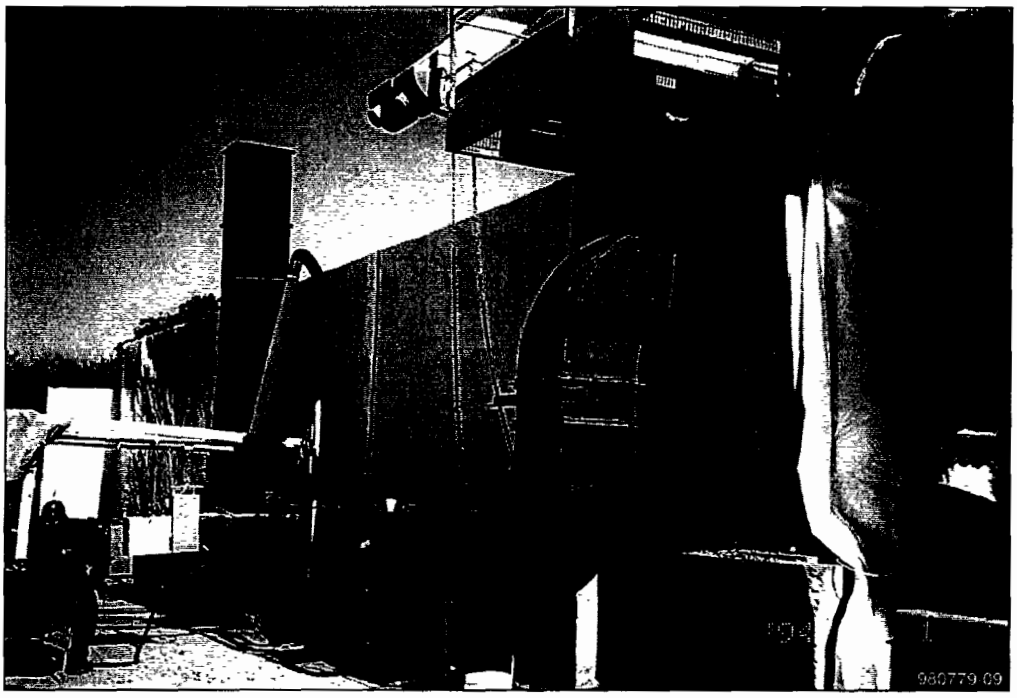

Figure 9. Exhaust Ducting, Sampling Ports, and Stack

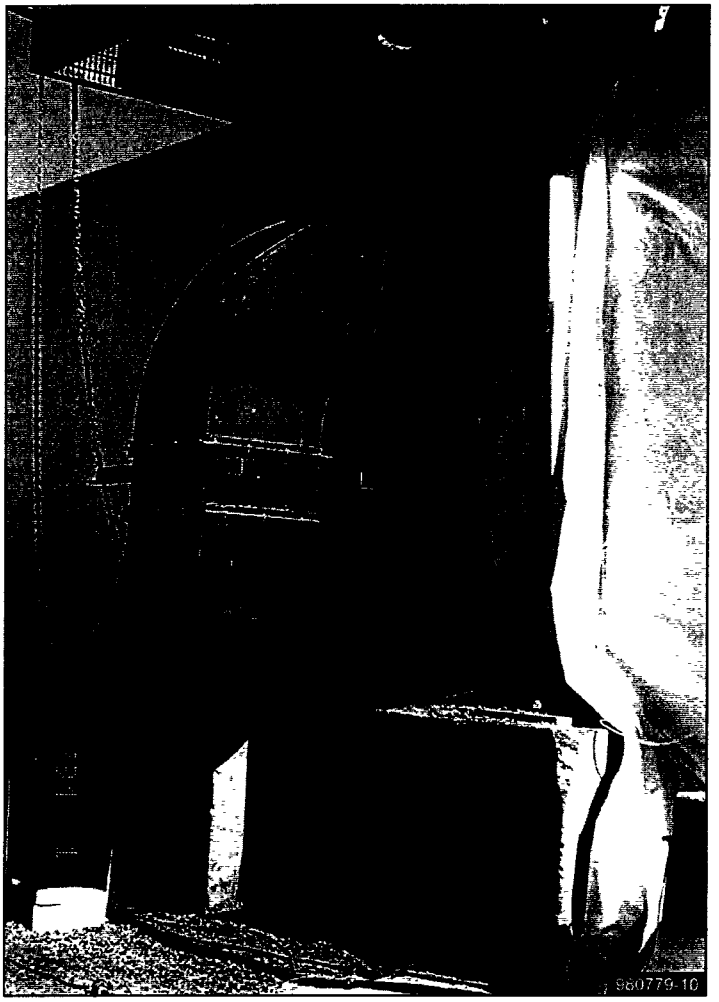

Figure 10. Close-up of Exhaust Duct Elbow (used for deposition wipe sample)

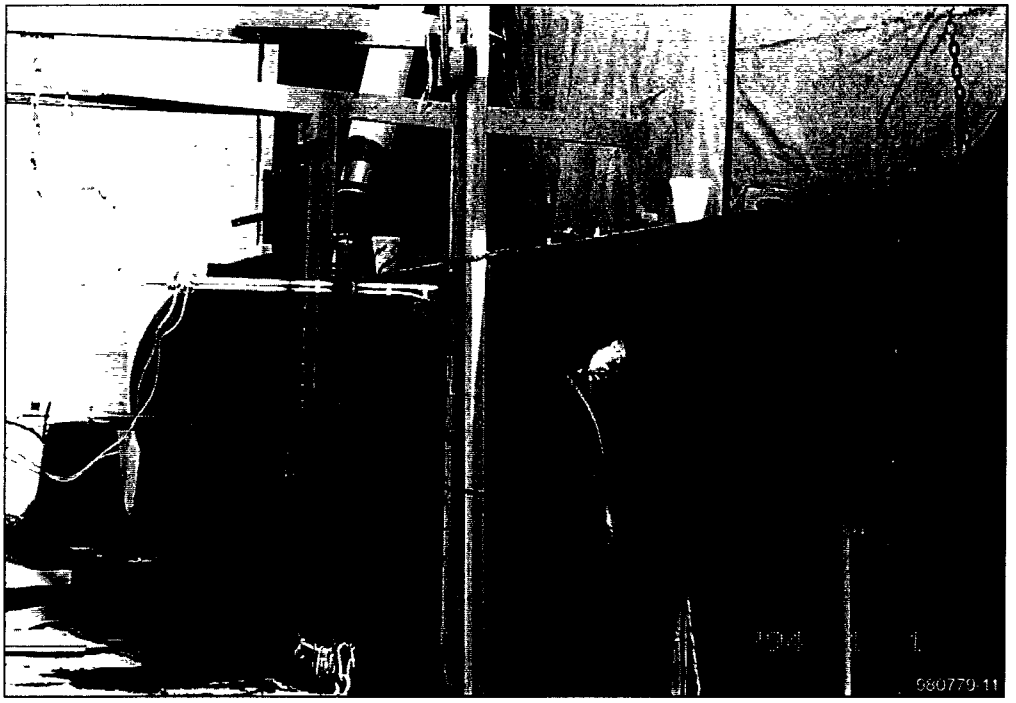

Figure 11. Close-up of Sampling Ports

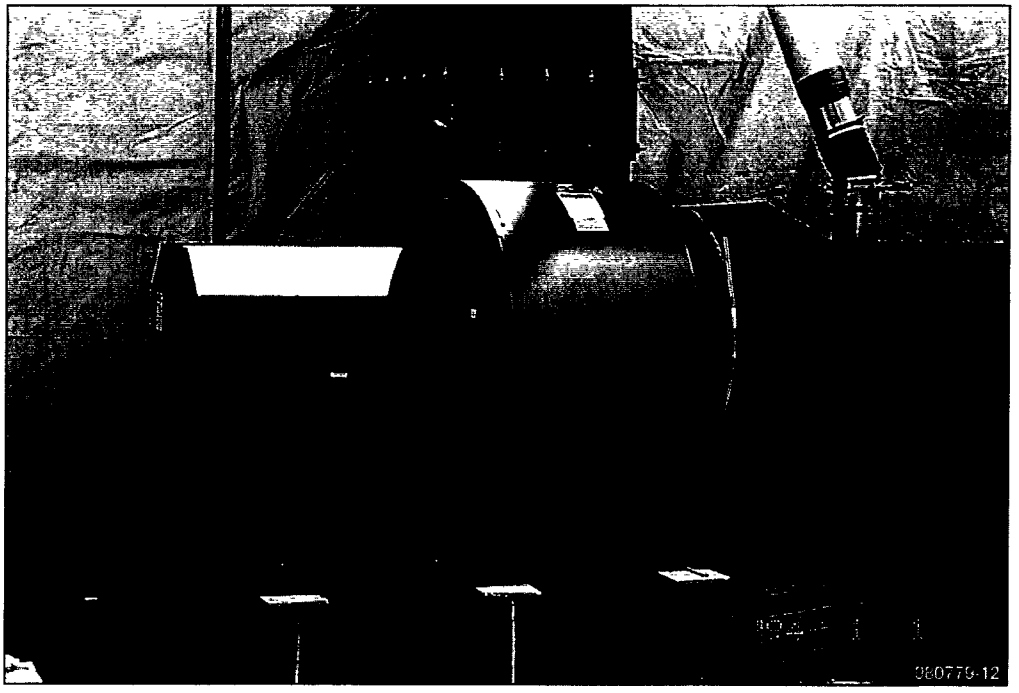

Figure 12. Close-up of Exhaust Fan, Damper, and Truck Exhaust Connection

Figure 13. Makeup Airspace Along Doorway Top - Streamers Indicating Flow

Figure 14. Makeup Airspace Along Doorway Bottom - Streamers Indicating Flow

Appendix B

Method 25A (THC) Calibration and Test Data

Run 1 - 10/5/98

Calibration error determination/Linearity test

Standard	Initial cal gas (actual)	Measured value (reading)	Difference as % span[a] error	QA objective	QA result
Zero gas	0.0	0.1	**0.1**	± 5%	pass
Low	20.2	22.5	**2.3**	± 5%	pass
Midlevel	50.3	52.1	**1.8**	± 5%	pass
High	90.4	90.5	**0.1**	± 5%	pass

System bias check

Standard	Initial cal gas (actual)	Measured value (reading)	Difference as % span[a] error	QA objective	QA result
Zero gas	0.0	0.3	**0.3**	± 5%	pass
High	90.4	92.2	**1.8**	± 5%	pass

Calibration Drift

Standard	Predicted reading (using initial calibration)	Final cal gas (reading)	% Span[a] drift	QA objective	QA result
Zero gas	0.1	2.8	**2.7**	± 3%	pass
Midlevel	46.4	44.1	**-2.3**	± 3%	pass

[a] Span set at 100 ppm.

Run 2 - 10/6/98

Calibration error determination/Linearity test

Standard	Initial cal gas (actual)	Measured value (reading)	Difference as % span[a] error	QA objective	QA result
Zero gas	0.0	0.1	**0.1**	± 5%	pass
Low	20.3	21.2	**0.9**	± 5%	pass
Midlevel	50.8	53.3	**2.5**	± 5%	pass
High	90.7	90.8	**0.1**	± 5%	pass

System bias check

Standard	Initial cal gas (actual)	Measured value (reading)	Difference as % span[a] error	QA objective	QA result
Zero gas	0.0	-0.3	**-0.3**	± 5%	pass
High	90.2	85.7	**-4.5**	± 5%	pass

Calibration Drift

Standard	Predicted reading (using initial calibration)	Final cal gas (reading)	% Span[a] drift	QA objective	QA result
Zero gas	0.1	-0.3	**-0.4**	± 3%	pass
Midlevel	50.2	49.4	**-0.8**	± 3%	pass

[a] Span set at 100 ppm.

Run 3 - 10/7/98

Calibration error determination/Linearity test

Standard	Initial cal gas (actual)	Measured value (reading)	Difference as % span[a] error	QA objective	QA result
Zero gas	0.0	0.0	**0.0**	± 5%	pass
Low	25.2	26.9	**1.7**	± 5%	pass
Midlevel	50.8	53.7	**2.9**	± 5%	pass
High	90.5	90.2	**-0.3**	± 5%	pass

System bias check

Standard	Initial cal gas (actual)	Measured value (reading)	Difference as % span[a] error	QA objective	QA result
Zero gas	0.0	0.0	**0.0**	± 5%	pass
High	90.2	87.4	**-2.8**	± 5%	pass

Calibration Drift

Standard	Predicted reading (using initial calibration)	Final cal gas (reading)	% Span[a] drift	QA objective	QA result
Zero gas	0.0	0.3	**0.3**	± 3%	pass
Midlevel	50.2	49.0	**-1.2**	± 3%	pass

[a] Span set at 100 ppm.

Plant: D (Massachusetts)
MRI Project: 4701-08-18-04 & 4951-04-05
Run No.: 1
Date: 10/05/98

TIME 24 hr.	THC (10-sec Avg.) ppm	THC (1-min Avg.) ppm	THC Emissions g/min
7:21:00		2.0	1.6
7:22:00		1.7	1.4
7:23:00		1.6	1.3
7:24:00		1.5	1.2
7:25:00		2.4	1.9
7:26:00		3.0	2.4
7:27:00		3.4	2.7
7:29:00		4.6	3.7
7:30:00		2.6	2.1
7:31:00		2.5	2.0
7:32:00		2.6	2.1
7:33:00		2.7	2.2
7:34:00		4.0	3.2
7:35:00		5.2	4.2
7:36:00		3.6	2.9
7:37:00		2.5	2.0
7:38:00		2.8	2.2
7:39:00		2.9	2.3
7:41:00		2.4	1.9
7:42:00		2.1	1.7
7:43:00		2.0	1.6
7:44:00		1.9	1.5
7:45:00		1.8	1.4
7:57:00		2.6	2.1
7:58:00		1.6	1.3
7:59:00		1.4	1.1
8:00:00		1.3	1.0
8:01:00		1.3	1.0
8:02:00		1.3	1.0
8:03:00		3.0	2.4
8:04:00		3.8	3.0
8:08:00		2.2	1.8
8:09:00		2.2	1.8
8:10:00		1.9	1.5
8:11:00		2.2	1.8
8:12:00		2.4	1.9
8:13:00		2.5	2.0
8:14:00		2.7	2.2
8:15:00		3.0	2.4
8:17:00		2.0	1.6
8:18:00		1.7	1.4
8:19:00		1.6	1.3
8:20:00		2.4	1.9
8:21:00		1.9	1.5
8:22:00		2.2	1.8

TIME 24 hr.	THC (10-sec Avg.) ppm	THC (1-min Avg.) ppm	THC Emissions g/min
8:23:00		2.3	1.8
8:25:00		2.7	2.2
8:26:00		2.8	2.2
8:27:00		1.9	1.5
8:28:00		1.6	1.3
8:29:00		1.5	1.2
8:30:00		1.8	1.4
8:31:00		2.0	1.6
8:32:00		2.1	1.7
8:33:00		2.3	1.8
8:37:00		1.8	1.4
8:38:00		1.7	1.4
8:39:00		1.6	1.3
8:40:00		2.0	1.6
8:41:00		2.4	1.9
8:42:00		1.9	1.5
8:43:00		2.1	1.7
8:44:00		1.5	1.2
8:45:00		1.4	1.1
8:47:00		1.2	1.0
8:48:00		1.2	1.0
8:49:00		1.2	1.0
8:50:00		2.8	2.2
9:06:00		2.5	2.0
9:07:00		2.1	1.7
9:08:00		2.3	1.8
9:09:00		2.4	1.9
9:10:00		2.5	2.0
9:11:00		2.8	2.2
9:12:00		3.1	2.5
9:14:00		2.2	1.8
9:15:00		2.6	2.1
9:16:00		2.8	2.2
9:17:00		3.1	2.5
9:18:00		3.4	2.7
9:19:00		3.6	2.9
9:20:00		3.8	3.0
9:22:00		3.0	2.4
9:23:00		3.4	2.7
9:24:00		3.6	2.9
9:25:00		3.8	3.0
9:26:00		4.1	3.3
9:27:00		4.9	3.9
9:28:00		2.9	2.3
9:29:00		2.9	2.3
9:30:00		3.0	2.4
9:31:00		3.0	2.4
9:32:00		3.1	2.5
9:33:00		3.4	2.7

TIME 24 hr.	THC (10-sec Avg.) ppm	THC (1-min Avg.) ppm	THC Emissions g/min
9:34:00		3.6	2.9
9:35:00		2.6	2.1
9:36:00		2.8	2.2
9:37:00		2.4	1.9
9:38:00		2.1	1.7
9:39:00		2.6	2.1
9:40:00		2.9	2.3
9:41:00		3.1	2.5
9:42:00		3.2	2.6
9:43:00		3.5	2.8
9:45:00		2.4	1.9
9:46:00		2.6	2.1
9:47:00		2.7	2.2
9:48:00		2.8	2.2
9:49:00		2.9	2.3
9:50:00		3.0	2.4
9:51:00		3.2	2.6
9:52:00		3.4	2.7
9:53:00		3.9	3.1
9:54:00		2.2	1.8
9:55:00		2.7	2.2
9:56:00		3.1	2.5
9:57:00		3.3	2.6
9:58:00		3.6	2.9
9:59:00		4.0	3.2
10:00:00		4.8	3.8
10:01:00		4.2	3.4
10:02:00		2.6	2.1
10:03:00		2.5	2.0
10:04:00		3.4	2.7
10:05:00		4.7	3.8
10:06:00		2.4	1.9
10:07:00		2.6	2.1
10:08:00		2.8	2.2
10:09:00		3.1	2.5
10:10:00		3.1	2.5
10:11:00		2.1	1.7
10:12:00		2.5	2.0
10:13:00		2.7	2.2
10:14:00		2.8	2.2
10:15:00		3.2	2.6
10:16:00		3.6	2.9
10:17:00		3.8	3.0
10:25:00		2.4	1.9
10:26:00		2.8	2.2
10:27:00		3.0	2.4
10:28:00		3.1	2.5
10:29:00		3.2	2.6
10:30:00		3.6	2.9
10:31:00		3.8	3.0
10:33:00		2.9	2.3
10:34:00		3.0	2.4

TIME 24 hr.	THC (10-sec Avg.) ppm	THC (1-min Avg.) ppm	THC Emissions g/min
10:35:00		2.4	1.9
10:36:00		2.7	2.2
10:37:00		3.0	2.4
10:38:00		3.3	2.6
10:54:00		1.9	1.5
10:55:00		2.5	2.0
10:56:00		2.1	1.7
10:57:00		1.9	1.5
10:58:00		1.8	1.4
10:59:00		2.2	1.8
11:00:00		2.2	1.8
11:01:00		1.8	1.4
11:02:00		3.8	3.0
11:05:00		2.3	1.8
11:06:00		2.5	2.0
11:08:00		3.0	2.4
11:09:00		3.2	2.6
11:10:00		3.9	3.1
11:11:00		2.2	1.8
11:12:00		1.9	1.5
11:13:00		2.8	2.2
11:14:00		3.3	2.6
11:15:00		4.0	3.2
11:16:00		4.7	3.8
11:17:00		5.5	4.4
11:18:00		2.7	2.2
11:19:00		2.7	2.2
11:20:00		2.8	2.2
11:21:00		2.7	2.2
11:22:00		3.9	3.1
11:23:00		4.9	3.9
11:24:00		2.8	2.2
11:25:00		2.7	2.2
11:26:00		3.0	2.4
11:27:00		3.1	2.5
11:28:00		3.2	2.6
11:29:00		4.0	3.2
11:30:00		4.5	3.6
11:31:00		5.5	4.4
11:32:00		4.7	3.8
11:33:00		3.0	2.4
11:34:00		3.1	2.5
11:35:00		2.9	2.3
11:36:00		3.6	2.9
11:37:00		4.0	3.2
11:38:00		4.4	3.5
11:39:00		4.8	3.8
11:40:00		5.4	4.3
11:41:00		5.5	4.4
11:42:00		3.0	2.4
11:43:00		5.0	4.0
11:44:00		6.1	4.9

TIME 24 hr.	THC (10-sec Avg.) ppm	THC (1-min Avg.) ppm	THC Emissions g/min
11:45:00		7.7	6.2
11:46:00		8.3	6.6
11:47:00		3.6	2.9
11:48:00		3.8	3.0
11:56:00		4.6	3.7
11:57:00		3.6	2.9
11:58:00		3.9	3.1
11:59:00		3.9	3.1
12:00:00		5.0	4.0
12:01:00		5.8	4.6
12:02:00		4.0	3.2
12:03:00		3.8	3.0
12:04:00		3.7	3.0
12:05:00		3.9	3.1
12:06:00		3.9	3.1
12:07:00		4.5	3.6
12:08:00		5.3	4.2
12:09:00		6.2	5.0
12:10:00		5.1	4.1
12:11:00		3.5	2.8
12:12:00		3.7	3.0
12:13:00		3.8	3.0
12:14:00		3.9	3.1
12:15:00		3.9	3.1
12:16:00		5.5	4.4
12:17:00		4.0	3.2
12:18:00		3.5	2.8
12:19:00		3.6	2.9
12:20:00		3.8	3.0
12:21:00		4.1	3.3
12:22:00		4.3	3.4
12:23:00		4.3	3.4
12:24:00		4.3	3.4
12:25:00		3.5	2.8
12:26:00		3.5	2.8
12:27:00		3.7	3.0
13:52:02	2.7		
13:52:12	2.7		
13:52:22	2.6		
13:52:32	2.5		
13:52:42	2.5		
13:52:52	2.4	2.6	2.1
13:53:02	2.4		
13:53:12	2.4		
13:53:22	2.4		
13:53:32	2.4		
13:53:42	2.4		
13:53:52	2.4	2.4	1.9
13:54:02	2.4		
13:54:12	2.4		
13:54:22	2.4		
13:54:32	2.3		
13:54:42	2.3		

TIME 24 hr.	THC (10-sec Avg.) ppm	THC (1-min Avg.) ppm	THC Emissions g/min
13:54:52	2.3	2.3	1.9
13:55:02	2.2		
13:55:12	2.3		
13:55:22	2.2		
13:55:23	2.3		
13:55:42	2.2		
13:55:52	2.2	2.2	1.8
13:56:02	2.2		
13:56:12	2.2		
13:56:22	2.2		
13:56:32	2.1		
13:56:42	2.2		
13:56:52	2.2	2.2	1.7
Average Concentration (ppm) =		3.1	
Minimum Concentration (ppm) =		1.2	
Maximum Concentration (ppm) =		8.3	
Average Emission Rate (g/min) =		2.5	
Minimum Emission Rate (g/min) =		1.0	
Maximum Emission Rate (g/min) =		6.6	
Length of Run (min) =		220	
Total THC, as propane, released (g) =		542	

[a] The emission rate was caluculated using a flow rate of 437 dscm/min. This is the average exhaust duct volumetric flow rate as measured by the two Method 315 sampling trains operated by PES personnel.

Plant: D (Massachusetts)
MRI Project: 4701-08-18-04 & 4951-04-05
Run No.: 2
Date: 10/06/98

TIME 24 hr.	THC (10-sec Avg.) ppm	THC (1-min Avg.) ppm	THC Emissions g/min
7:14:00		2.7	2.0
7:15:00		2.5	1.9
7:16:00		2.7	2.0
7:17:00		2.9	2.2
7:18:00		3.3	2.5
7:19:00		3.4	2.6
7:20:00		3.7	2.8
7:21:00		3.3	2.5
7:22:00		2.8	2.1
7:23:00		2.9	2.2
7:24:00		3.1	2.3
7:25:00		3.2	2.4
7:26:00		3.4	2.6
7:27:00		3.7	2.7
7:28:00		4.4	3.3
7:29:00		5.2	3.9
7:30:00		3.9	2.9
7:31:00		3.2	2.4
7:32:00		3.5	2.6
7:33:00		3.0	2.3
7:34:00		2.8	2.1
7:35:00		2.6	2.0
7:36:00		2.9	2.1
7:37:00		3.2	2.4
7:38:00		2.6	1.9
7:39:00		2.3	1.7
7:40:00		2.2	1.6
7:41:00		2.5	1.8
7:42:00		2.7	2.0
7:43:00		2.8	2.1
7:44:00		3.1	2.3
7:45:00		3.3	2.4
7:46:00		2.3	1.7
7:47:00		2.6	2.0
7:48:00		3.1	2.3
7:49:00		3.3	2.5
7:50:00		3.7	2.7
7:51:00		4.4	3.3
7:52:00		5.1	3.8
7:53:00		3.3	2.5
7:54:00		2.8	2.1
7:55:00		2.6	1.9
7:56:00		3.8	2.8
7:57:00		4.7	3.5
7:58:00		3.8	2.8
7:59:00		3.0	2.2
8:00:00		3.1	2.3
8:01:00		3.4	2.5
8:02:00		3.1	2.3
8:03:00		2.2	1.6
8:04:00		3.8	2.8

TIME 24 hr.	THC (10-sec Avg.) ppm	THC (1-min Avg.) ppm	THC Emissions g/min
8:05:00		4.0	3.0
8:06:00		4.6	3.5
8:07:00		5.5	4.1
8:08:00		5.6	4.2
8:09:00		2.9	2.2
8:10:00		2.4	1.8
8:11:00		3.0	2.2
8:12:00		4.8	3.6
8:13:00		4.5	3.4
8:14:00		3.1	2.3
8:15:00		3.2	2.4
8:16:00		3.5	2.6
8:17:00		3.8	2.9
8:18:00		3.9	2.9
8:19:00		4.0	3.0
8:20:00		2.7	2.0
8:21:00		3.1	2.3
8:22:00		4.0	3.0
8:23:00		4.9	3.6
8:24:00		5.7	4.3
8:25:00		5.2	3.9
8:26:00		3.3	2.5
8:37:00		2.8	2.1
8:38:00		3.6	2.7
8:39:00		4.8	3.6
8:40:00		5.9	4.4
8:41:00		3.3	2.5
8:42:00		2.5	1.9
8:43:00		2.3	1.7
8:44:00		2.0	1.5
8:45:00		1.8	1.3
8:46:00		1.6	1.2
8:47:00		1.6	1.2
9:00:00		1.7	1.3
9:01:00		2.4	1.8
9:02:00		2.9	2.2
9:03:00		3.3	2.5
9:04:00		3.6	2.7
9:05:00		3.7	2.8
9:06:00		4.6	3.5
9:07:00		2.3	1.7
9:08:00		3.1	2.3
9:09:00		3.0	2.2
9:10:00		2.7	2.0
9:11:00		2.2	1.7
9:12:00		4.7	3.5
9:13:00		6.5	4.9
9:28:00		3.3	2.4
9:29:00		6.5	4.8
9:30:00		7.7	5.8
9:31:00		6.8	5.1
9:32:00		4.5	3.3
9:33:00		4.2	3.1

TIME 24 hr.	THC (10-sec Avg.) ppm	THC (1-min Avg.) ppm	THC Emissions g/min
9:34:00		6.1	4.5
9:35:00		6.8	5.1
9:36:00		4.7	3.5
9:37:00		4.0	3.0
9:38:00		4.2	3.1
9:39:00		4.3	3.2
9:40:00		4.5	3.4
9:41:00		6.0	4.5
9:42:00		6.4	4.8
9:43:00		5.2	3.9
9:44:00		3.6	2.7
9:45:00		3.7	2.8
9:46:00		4.0	3.0
9:48:00		3.0	2.3
9:49:00		3.3	2.4
9:50:00		3.6	2.7
9:51:00		3.7	2.8
9:52:00		4.0	3.0
9:53:00		4.2	3.1
9:54:00		4.4	3.3
9:55:00		5.2	3.9
9:56:00		5.8	4.3
9:57:00		3.0	2.3
9:58:00		3.2	2.4
9:59:00		3.3	2.5
10:00:00		2.4	1.8
10:01:00		2.1	1.6
10:02:00		2.8	2.1
10:03:00		3.2	2.4
10:08:00		5.0	3.7
10:09:00		5.3	4.0
10:10:00		3.4	2.6
10:11:00		2.6	2.0
10:12:00		3.5	2.6
10:13:00		3.7	2.8
10:14:00		4.2	3.1
10:15:00		4.2	3.1
10:16:00		4.7	3.5
10:28:00		3.9	2.9
10:29:00		4.1	3.0
10:30:00		3.8	2.8
10:31:00		4.9	3.7
10:32:00		6.0	4.5
10:33:00		5.4	4.0
10:34:00		3.8	2.8
10:35:00		3.8	2.9
10:36:00		4.1	3.0
10:37:00		4.1	3.0
10:38:00		4.4	3.3
10:39:00		4.3	3.2
10:40:00		5.9	4.4
10:41:00		6.0	4.5
10:42:00		5.1	3.8

TIME 24 hr.	THC (10-sec Avg.) ppm	THC (1-min Avg.) ppm	THC Emissions g/min
10:43:00		3.5	2.6
10:44:00		3.8	2.8
10:45:00		4.0	3.0
10:46:00		4.1	3.1
10:47:00		3.4	2.5
10:48:00		3.0	2.2
10:49:00		2.7	2.0
10:50:00		2.5	1.9
10:51:00		2.3	1.7
10:52:00		2.2	1.7
10:53:00		2.1	1.6
11:27:00		0.9	0.7
11:28:00		0.8	0.6
11:29:00		0.7	0.5
11:30:00		0.6	0.5
11:31:00		0.5	0.4
11:32:00		0.5	0.4
11:33:00		0.5	0.4
11:34:00		0.7	0.5
11:35:00		1.9	1.4
11:36:00		2.6	1.9
11:37:00		3.1	2.3
11:38:00		3.3	2.4
11:39:00		3.7	2.8
11:40:00		4.5	3.4
11:41:00		2.8	2.1
11:42:00		3.1	2.3
11:43:00		3.1	2.4
11:44:00		3.3	2.5
11:45:00		3.7	2.7
11:46:00		3.8	2.9
11:54:00		3.0	2.2
11:55:00		3.3	2.5
11:56:00		3.4	2.6
11:57:00		3.6	2.7
11:58:00		3.7	2.8
11:59:00		3.8	2.9
12:00:00		4.4	3.3
12:02:00		3.2	2.4
12:03:00		3.3	2.5
12:04:00		2.8	2.1
12:05:00		2.5	1.9
12:06:00		2.3	1.7
12:07:00		2.1	1.6
12:08:00		1.8	1.3
12:09:00		1.5	1.1
12:15:00		0.8	0.6
12:16:00		0.7	0.5
12:17:00		0.7	0.5
12:38:00		2.8	2.1
12:39:00		1.8	1.4

TIME 24 hr.	THC (10-sec Avg.) ppm	THC (1-min Avg.) ppm	THC Emissions g/min
12:40:00		1.5	1.1
12:41:00		4.1	3.1
12:42:00		4.5	3.3
12:43:00		3.7	2.8
12:44:00		2.4	1.8
12:45:00		2.6	2.0
12:46:00		2.9	2.2
12:47:00		3.3	2.5
12:48:00		3.6	2.7
12:49:00		3.9	2.9
12:50:00		2.8	2.1
12:51:00		2.0	1.5
12:52:00		3.2	2.4
12:53:00		3.9	2.9
12:54:00		4.4	3.3
12:55:00		4.9	3.7
12:56:00		5.0	3.8
12:57:00		3.5	2.6
12:58:00		3.3	2.5
12:59:00		3.6	2.7
13:00:00		3.5	2.6
13:01:00		2.6	1.9
13:02:00		2.2	1.6
13:03:00		3.2	2.4
13:04:00		3.8	2.9
13:05:00		4.4	3.3
13:06:00		4.8	3.6
13:07:00		5.2	3.9
13:08:00		6.8	5.1
13:09:00		5.2	3.9
13:10:00		3.6	2.7
13:11:00		3.7	2.7
13:12:00		2.5	1.9
13:13:00		5.2	3.9
13:14:00		5.5	4.1
13:15:00		6.0	4.4
13:16:00		3.8	2.8
13:17:00		3.2	2.4
13:18:00		3.6	2.7
13:19:00		3.7	2.8
13:20:00		2.6	1.9
13:33:02	4.8		
13:33:12	4.0		
13:33:22	3.4		
13:33:32	3.1		
13:33:42	2.9		
13:33:52	2.8	3.5	2.6
13:34:02	2.5		
13:34:12	2.4		
13:34:22	2.2		
13:34:32	2.1		
13:34:42	2.0		
13:34:52	1.9	2.2	1.6
13:35:02	1.8		
13:35:12	1.8		

TIME 24 hr.	THC (10-sec Avg.) ppm	THC (1-min Avg.) ppm	THC Emissions g/min
13:35:22	1.7		
13:35:32	1.6		
13:35:42	1.6		
13:35:52	1.5	1.7	1.2
13:36:02	1.5		
13:36:12	1.5		
13:36:22	1.3		
13:36:32	1.3		
13:36:42	1.3		
13:36:52	1.3	1.3	1.0
13:37:02	1.2		
13:37:12	1.2		
13:37:22	1.2		
13:37:32	1.1		
13:37:42	1.1		
13:37:52	1.1	1.2	0.9
13:38:02	1.1		
13:38:12	1.0		
13:38:22	1.0		
13:38:32	1.0		
13:38:42	1.0		
13:38:52	1.0	1.0	0.8

Average Concentration (ppm) =	3.5
Minimum Concentration (ppm) =	0.5
Maximum Concentration (ppm) =	7.7
Average Emission Rate[a] (g/min) =	2.6
Minimum Emission Rate (g/min) =	0.4
Maximum Emission Rate (g/min) =	5.8
Length of Run (min) =	243
Total THC, as propane, released (g) =	629

[a] The emission rate was caluculated using a flow rate of 408 dscm/min. This is the average exhaust duct volumetric flow rate as measured by the two Method 315 sampling trains operated by PES personnel.

Plant: D (Massachusetts)
MRI Project: 4701-08-18-04 & 4951-04-05
Run No.: 3
Date: 10/07/98

TIME 24 hr.	THC (1-sec Avg.) ppm	THC (10-sec Avg.) ppm	THC (1-min Avg.) ppm	THC Emissions g/min
6:36:00			3.2	2.3
6:37:00			2.1	1.5
6:38:00			3.2	2.3
6:39:00			2.1	1.5
6:40:00			2.3	1.6
6:41:00			2.5	1.8
6:42:00			2.6	1.8
6:43:00			2.8	2.0
6:44:00			3.2	2.2
6:45:00			2.0	1.5
6:46:00			2.5	1.8
6:47:00			2.8	2.0
6:48:00			3.0	2.1
6:49:00			3.2	2.3
6:50:00			3.5	2.5
6:51:00			3.7	2.6
6:52:00			4.6	3.2
6:53:00			5.3	3.8
6:54:00			2.6	1.8
6:55:00			3.1	2.2
6:56:00			3.5	2.5
6:57:00			3.7	2.6
6:58:00			3.9	2.7
6:59:00			4.0	2.8
7:00:00			4.5	3.2
7:01:00			4.9	3.4
7:02:00			5.2	3.7
7:03:00			2.9	2.1
7:04:00			2.2	1.6
7:05:00			1.9	1.4
7:06:00			2.8	2.0
7:07:00			3.2	2.3
7:08:00			3.7	2.7
7:09:00			4.1	2.9
7:11:00			5.3	3.7
7:12:00			5.9	4.2
7:13:00			5.5	3.9
7:14:00			3.3	2.3
7:15:00			5.5	3.9
7:16:00			5.7	4.1
7:17:00			3.9	2.8
7:18:00			3.6	2.6
7:19:00			3.8	2.7
7:20:00			4.1	2.9
7:21:00			4.3	3.0
7:22:00			3.4	2.4
7:23:00			3.0	2.1

TIME 24 hr.	THC (1-sec Avg.) ppm	THC (10-sec Avg.) ppm	THC (1-min Avg.) ppm	THC Emissions g/min
7:24:00			2.8	2.0
7:25:00			2.6	1.8
7:26:00			2.4	1.7
7:27:00			2.4	1.7
7:38:00			5.2	3.7
7:39:00			6.3	4.4
7:40:00			3.4	2.4
7:41:00			3.9	2.8
7:42:00			3.5	2.4
7:43:00			3.2	2.3
7:44:00			3.5	2.5
7:45:00			3.8	2.7
7:46:00			3.7	2.6
7:48:00			4.1	2.9
7:49:00			4.5	3.2
7:50:00			2.9	2.1
7:51:00			2.4	1.7
7:52:00			2.1	1.5
7:53:00			3.5	2.5
7:54:00			4.3	3.1
7:55:00			5.0	3.6
7:56:00			5.7	4.1
8:07:00			5.5	3.9
8:08:00			5.7	4.1
8:09:00			6.6	4.7
8:10:00			6.1	4.3
8:11:00			4.2	3.0
8:12:00			4.4	3.1
8:13:00			4.3	3.1
8:14:00			3.2	2.3
8:15:00			3.7	2.7
8:16:00			4.4	3.2
8:17:00			4.8	3.4
8:18:00			5.4	3.8
8:19:00			6.2	4.4
8:21:00			7.6	5.4
8:22:00			6.7	4.7
8:23:00			4.5	3.2
8:24:00			5.6	4.0
8:25:00			6.0	4.3
8:26:00			6.6	4.7
8:27:00			6.0	4.3
8:28:00			4.3	3.1
8:29:00			4.4	3.1
8:30:00			4.3	3.0
8:31:00			3.4	2.4
8:32:00			3.8	2.7
8:33:00			4.3	3.1
8:34:00			4.7	3.3

TIME 24 hr.	THC (1-sec Avg.) ppm	THC (10-sec Avg.) ppm	THC (1-min Avg.) ppm	THC Emissions g/min
8:35:00			5.0	3.5
8:36:00			5.4	3.8
8:38:00			3.7	2.6
8:39:00			4.6	3.3
8:40:00			5.4	3.8
8:41:00			6.0	4.2
8:42:00			6.4	4.5
8:43:00			7.5	5.3
8:44:00			8.2	5.8
8:45:00			4.6	3.2
8:46:00			5.7	4.1
8:47:00			4.3	3.0
8:48:00			4.4	3.1
8:49:00			4.6	3.2
8:50:00			5.7	4.1
8:51:00			7.0	5.0
8:52:00			4.8	3.4
8:53:00			4.6	3.2
8:54:00			3.9	2.8
8:55:00			3.6	2.5
8:56:00			3.3	2.4
8:57:00			3.1	2.2
8:58:00			3.0	2.1
8:59:00			2.8	2.0
9:10:00			5.2	3.7
9:11:00			3.5	2.5
9:14:00			1.0	0.7
9:15:00			0.8	0.6
9:16:00			0.7	0.5
9:53:00			4.2	2.9
9:54:00			2.6	1.9
9:55:00			2.0	1.4
9:56:00			2.2	1.5
9:57:00			2.7	1.9
9:58:00			2.9	2.1
9:59:00			3.5	2.4
10:00:00			4.0	2.8
10:01:00			2.1	1.5
10:02:00			1.6	1.1
10:03:00			1.3	0.9
10:03:40	1.2			
10:03:41	1.2			
10:03:42	1.2			
10:03:43	1.2			
10:03:44	1.2			
10:03:45	1.2			
10:03:46	1.2			
10:03:47	1.2			
10:03:48	1.2			

TIME 24 hr.	THC (1-sec Avg.) ppm	THC (10-sec Avg.) ppm	THC (1-min Avg.) ppm	THC Emissions g/min
10:03:49	1.2	1.2		
10:03:50	1.2			
10:03:51	1.2			
10:03:52	1.2			
10:03:53	1.2			
10:03:54	1.2			
10:03:55	1.2			
10:03:56	1.2			
10:03:57	1.2			
10:03:58	1.2			
10:03:59	1.2	1.2		
10:04:00	1.2			
10:04:01	1.2			
10:04:02	1.2			
10:04:03	1.2			
10:04:04	1.2			
10:04:05	1.2			
10:04:06	1.2			
10:04:07	1.2			
10:04:08	1.2			
10:04:09	1.2	1.2		
10:04:10	1.2			
10:04:11	1.2			
10:04:12	1.2			
10:04:13	1.2			
10:04:14	1.2			
10:04:15	1.2			
10:04:16	1.2			
10:04:17	1.1			
10:04:18	1.1			
10:04:19	1.1	1.2		
10:04:20	1.1			
10:04:21	1.1			
10:04:22	1.1			
10:04:23	1.1			
10:04:24	1.1			
10:04:25	1.2			
10:04:26	1.2			
10:04:27	1.2			
10:04:28	1.2			
10:04:29	1.2	1.1		
10:04:30	1.2			
10:04:31	1.2			
10:04:32	1.2			
10:04:33	1.2			
10:04:34	1.2			
10:04:35	1.2			
10:04:36	1.2			
10:04:37	1.2			
10:04:38	1.2			
10:04:39	1.2	1.2	1.2	0.8
10:04:40	1.2			
10:04:41	1.2			

TIME 24 hr.	THC (1-sec Avg.) ppm	THC (10-sec Avg.) ppm	THC (1-min Avg.) ppm	THC Emissions g/min
10:04:42	1.1			
10:04:43	1.1			
10:04:44	1.1			
10:04:45	1.1			
10:04:46	1.1			
10:04:47	1.1			
10:04:48	1.1			
10:04:49	1.1	1.1		
10:04:50	1.1			
10:04:51	1.1			
10:04:52	1.1			
10:04:53	1.1			
10:04:54	1.1			
10:04:55	1.1			
10:04:56	1.1			
10:04:57	1.1			
10:04:58	1.2			
10:04:59	1.2	1.1		
10:05:00	1.2			
10:05:01	1.3			
10:05:02	1.3			
10:05:03	1.3			
10:05:04	1.2			
10:05:05	1.2			
10:05:06	1.2			
10:05:07	1.1			
10:05:08	1.1			
10:05:09	1.1	1.2		
10:05:10	1.1			
10:05:11	1.1			
10:05:12	1.1			
10:05:13	1.1			
10:05:14	1.1			
10:05:15	1.1			
10:05:16	1.1			
10:05:17	1.1			
10:05:18	1.1			
10:05:19	1.1	1.1		
10:05:20	1.1			
10:05:21	1.1			
10:05:22	1.1			
10:05:23	1.1			
10:05:24	1.1			
10:05:25	1.1			
10:05:26	1.1			
10:05:27	1.1			
10:05:28	1.1	1.1	1.1	0.8
10:06:16	1.0			
10:06:17	1.0			
10:06:18	1.0			
10:06:19	1.0			
10:06:20	1.0			

TIME 24 hr.	THC (1-sec Avg.) ppm	THC (10-sec Avg.) ppm	THC (1-min Avg.) ppm	THC Emissions g/min
10:06:21	1.0			
10:06:22	1.0			
10:06:23	1.0			
10:06:24	1.0			
10:06:25	1.0	1.0		
10:06:26	1.0			
10:06:27	1.0			
10:06:28	1.0			
10:06:29	1.0			
10:06:30	1.0			
10:06:31	1.0			
10:06:32	1.0			
10:06:33	1.0			
10:06:34	1.0			
10:06:35	1.0	1.0		
10:06:36	1.0			
10:06:37	1.0			
10:06:38	1.0			
10:06:39	1.0			
10:06:40	1.0			
10:06:41	1.0			
10:06:42	1.0			
10:06:43	1.0			
10:06:44	1.0			
10:06:45	1.0	1.0		
10:06:46	1.0			
10:06:47	1.0			
10:06:48	1.0			
10:06:49	1.0			
10:06:50	1.0			
10:06:51	1.0			
10:06:52	1.0			
10:06:53	1.0			
10:06:54	1.0			
10:06:55	1.0	1.0		
10:06:56	1.0			
10:06:57	1.0			
10:06:58	1.0			
10:06:59	1.0			
10:07:00	1.0			
10:07:01	1.0			
10:07:02	1.0			
10:07:03	1.0			
10:07:04	1.0			
10:07:05	1.0	1.0		
10:07:06	1.0			
10:07:07	1.0			
10:07:08	1.0			
10:07:09	1.0			
10:07:10	1.0			
10:07:11	1.0			
10:07:12	1.0			
10:07:13	1.0			

TIME 24 hr.	THC (1-sec Avg.) ppm	THC (10-sec Avg.) ppm	THC (1-min Avg.) ppm	THC Emissions g/min
10:07:14	1.0			
10:07:15	1.0	1.0	1.0	0.7
10:07:16	1.0			
10:07:17	1.0			
10:07:18	1.0			
10:07:19	1.0			
10:07:20	1.0			
10:07:21	1.0			
10:07:22	1.0			
10:07:23	1.0			
10:07:24	1.0			
10:07:25	1.0	1.0		
10:07:26	1.0			
10:07:27	1.0			
10:07:28	1.0			
10:07:09	1.0			
10:07:30	1.0			
10:07:31	1.0			
10:07:32	1.0			
10:07:33	1.0			
10:07:34	1.0			
10:07:35	1.0	1.0		
10:07:36	1.0			
10:07:37	1.0			
10:07:38	1.1			
10:07:39	1.1			
10:07:40	1.1			
10:07:41	1.1			
10:07:42	1.1			
10:07:43	1.1			
10:07:44	1.0			
10:07:45	1.0	1.1		
10:07:46	1.0			
10:07:47	1.0			
10:07:48	1.0			
10:07:49	1.0			
10:07:50	1.0			
10:07:51	1.0			
10:07:52	1.0			
10:07:53	1.0			
10:07:54	1.0			
10:07:55	1.0	1.0		
10:07:56	1.0			
10:07:57	1.0			
10:07:58	1.0			
10:07:59	1.0		1.0	0.7
10:13:00	3.3			
10:13:01	3.3			
10:13:02	3.3			
10:13:03	3.3			
10:13:04	3.2			
10:13:05	3.2			

TIME 24 hr.	THC (1-sec Avg.) ppm	THC (10-sec Avg.) ppm	THC (1-min Avg.) ppm	THC Emissions g/min
10:13:06	3.2			
10:13:07	3.1			
10:13:08	3.2			
10:13:09	3.2	3.2		
10:13:10	3.1			
10:13:11	3.1			
10:13:12	3.1			
10:13:13	3.0			
10:13:14	2.9			
10:13:15	2.9			
10:13:16	2.9			
10:13:17	2.8			
10:13:18	2.8			
10:13:19	2.8	3.0		
10:13:20	2.8			
10:13:21	2.8			
10:13:21	2.8			
10:13:23	2.8			
10:13:24	2.8			
10:13:25	2.7			
10:13:26	2.7			
10:13:27	2.7			
10:13:28	2.7			
10:13:29	2.7	2.8		
10:13:30	2.7			
10:13:31	2.7			
10:13:32	2.7			
10:13:33	2.7			
10:13:34	2.6			
10:13:35	2.6			
10:13:36	2.6			
10:13:37	2.6			
10:13:38	2.6			
10:13:39	2.6	2.6		
10:13:40	2.6			
10:13:41	2.6			
10:13:42	2.5			
10:13:43	2.5			
10:13:44	2.5			
10:13:45	2.5			
10:13:46	2.5			
10:13:47	2.5			
10:13:48	2.5			
10:13:49	2.5	2.5		
10:13:50	2.5			
10:13:51	2.5			
10:13:52	2.5			
10:13:53	2.5			
10:13:54	2.5			
10:13:55	2.5			
10:13:56	2.4			
10:13:57	2.4			
10:13:58	2.4			

TIME 24 hr.	THC (1-sec Avg.) ppm	THC (10-sec Avg.) ppm	THC (1-min Avg.) ppm	THC Emissions g/min
10:13:59	2.4	2.5	2.8	2.0
10:14:00	2.4			
10:14:01	2.4			
10:14:02	2.4			
10:14:03	2.4			
10:14:04	2.4			
10:14:05	2.4			
10:14:06	2.4			
10:14:07	2.4			
10:14:08	2.4			
10:14:09	2.4	2.4		
10:14:10	2.4			
10:14:11	2.3			
10:14:12	2.3			
10:14:13	2.3			
10:14:14	2.3			
10:14:15	2.3			
10:14:16	2.3			
10:14:17	2.3			
10:14:18	2.3			
10:14:19	2.3	2.3		
10:14:20	2.3			
10:14:21	2.3			
10:14:22	2.5			
10:14:23	2.7			
10:14:24	3.1			
10:14:25	3.6			
10:14:26	4.1			
10:14:27	4.6			
10:14:28	5.0			
10:14:29	5.3	3.5		
10:14:30	5.4			
10:14:31	5.4			
10:14:32	5.3			
10:14:33	5.2			
10:14:34	5.0			
10:14:35	4.8			
10:14:36	4.7			
10:14:37	4.6			
10:14:38	4.5			
10:14:39	4.4	4.9		
10:14:40	4.3			
10:14:41	4.2			
10:14:42	4.1			
10:14:43	4.0			
10:14:44	3.9			
10:14:45	3.8			
10:14:46	3.8			
10:14:47	3.7			
10:14:48	3.7			
10:14:49	3.6	3.9		
10:14:50	3.5			
10:14:51	3.5			

TIME 24 hr.	THC (1-sec Avg.) ppm	THC (10-sec Avg.) ppm	THC (1-min Avg.) ppm	THC Emissions g/min
10:14:52	3.5			
10:14:53	3.4			
10:14:54	3.4			
10:14:55	3.3			
10:14:56	3.3			
10:14:57	3.2			
10:14:58	3.2			
10:14:59	3.2	3.4	3.4	2.4
10:15:00	3.1			
10:15:01	3.1			
10:15:02	3.1			
10:15:03	3.0			
10:15:04	3.0			
10:15:05	3.0			
10:15:06	3.0			
10:15:07	3.0			
10:15:08	3.0			
10:15:09	2.9	3.0		
10:15:10	2.9			
10:15:11	2.9			
10:15:12	2.9			
10:15:13	2.9			
10:15:14	2.8			
10:15:15	2.8			
10:15:16	2.8			
10:15:17	2.8			
10:15:18	2.8			
10:15:19	2.8	2.8		
10:15:20	2.8			
10:15:21	2.8			
10:15:22	2.8			
10:15:23	2.7			
10:15:24	2.7			
10:15:25	2.7			
10:15:26	2.7			
10:15:27	2.8			
10:15:28	2.9			
10:15:29	3.2	2.8		
10:15:30	3.5			
10:15:31	3.9			
10:15:32	4.3			
10:15:33	4.7			
10:15:34	5.0			
10:15:35	5.1			
10:15:36	5.2			
10:15:37	5.2			
10:15:38	5.1			
10:15:39	5.0	4.7		
10:15:40	4.9			
10:15:41	4.8			
10:15:42	4.6			
10:15:43	4.5			
10:15:44	4.5			

TIME 24 hr.	THC (1-sec Avg.) ppm	THC (10-sec Avg.) ppm	THC (1-min Avg.) ppm	THC Emissions g/min
10:15:45	4.4			
10:15:46	4.3			
10:15:47	4.2			
10:15:48	4.1			
10:15:49	4.0	4.4		
10:15:50	4.0			
10:15:51	3.9			
10:15:52	3.8			
10:15:53	3.8			
10:15:54	3.7			
10:15:55	3.7			
10:15:56	3.6			
10:15:57	3.6			
10:15:58	3.5			
10:15:59	3.5	3.7	3.6	2.5
10:16:00	3.5			
10:16:01	3.4			
10:16:02	3.4			
10:16:03	3.4			
10:16:04	3.4			
10:16:05	3.3			
10:16:06	3.3			
10:16:07	3.3			
10:16:08	3.2			
10:16:09	3.2	3.3		
10:16:10	3.2			
10:16:11	3.2			
10:16:12	3.1			
10:16:13	3.1			
10:16:14	3.1			
10:16:15	3.1			
10:16:16	3.1			
10:16:17	3.0			
10:16:18	3.0			
10:16:19	3.0	3.1		
10:16:20	3.0			
10:16:21	3.0			
10:16:22	3.0			
10:16:23	3.0			
10:16:24	2.9			
10:16:25	2.9			
10:16:26	2.9			
10:16:27	2.9			
10:16:28	2.9			
10:16:29	2.9	2.9		
10:16:30	2.9			
10:16:31	2.9			
10:16:32	2.9			
10:16:33	2.8			
10:16:34	2.8			
10:16:35	2.8			
10:16:36	2.8			
10:16:37	2.8			

TIME 24 hr.	THC (1-sec Avg.) ppm	THC (10-sec Avg.) ppm	THC (1-min Avg.) ppm	THC Emissions g/min
10:16:38	2.7			
10:16:39	2.7	2.8		
10:16:40	2.7			
10:16:41	2.7			
10:16:42	2.7			
10:16:43	2.7			
10:16:44	2.7			
10:16:45	2.7			
10:16:46	2.7			
10:16:47	2.7			
10:16:48	2.7			
10:16:49	2.7	2.7		
10:16:50	2.8			
10:16:51	2.9			
10:16:52	3.2			
10:16:53	3.5			
10:16:54	3.9			
10:16:55	4.2			
10:16:56	4.6			
10:16:57	4.8			
10:16:58	4.9			
10:16:59	4.9	4.0	3.1	2.2
10:17:00	4.8			
10:17:01	4.7			
10:17:02	4.6			
10:17:03	4.5			
10:17:04	4.5			
10:17:05	4.4			
10:17:06	4.3			
10:17:07	4.2			
10:17:08	4.2			
10:17:09	4.1	4.4		
10:17:10	4.0			
10:17:11	4.0			
10:17:12	3.9			
10:17:13	3.8			
10:17:14	3.8			
10:17:05	3.7			
10:17:16	3.7			
10:17:17	3.6			
10:17:18	3.6			
10:17:19	3.5	3.8		
10:17:20	3.5			
10:17:21	3.4			
10:17:22	3.4			
10:17:23	3.4			
10:17:24	3.3			
10:17:25	3.3			
10:17:26	3.3			
10:17:27	3.3			
10:17:28	3.2			
10:17:29	3.2	3.3		
10:17:30	3.2			

TIME 24 hr.	THC (1-sec Avg.) ppm	THC (10-sec Avg.) ppm	THC (1-min Avg.) ppm	THC Emissions g/min
10:17:31	3.1			
10:17:32	3.1			
10:17:33	3.1			
10:17:34	3.1			
10:17:35	3.1			
10:17:36	3.1			
10:17:37	3.0			
10:17:38	3.0			
10:17:39	3.0	3.1		
10:17:40	2.9			
10:17:41	2.9			
10:17:42	2.9			
10:17:43	2.8			
10:17:44	2.8			
10:17:45	2.8			
10:17:46	2.8			
10:17:47	2.8			
10:17:48	2.7			
10:17:49	2.7	2.8		
10:17:50	2.7			
10:17:51	2.7			
10:17:52	2.6			
10:17:53	2.6			
10:17:54	2.6			
10:17:55	2.6			
10:17:56	2.6			
10:17:57	2.6			
10:17:58	2.5			
10:17:59	2.5	2.6	3.3	2.4
10:18:00	2.5			
10:18:01	2.5			
10:18:02	2.5			
10:18:03	2.5			
10:18:04	2.4			
10:18:05	2.4			
10:18:06	2.4			
10:18:07	2.4			
10:18:08	2.4			
10:18:09	2.3	2.4		
10:18:00			2.0	1.4
10:19:00			1.6	1.1
10:20:00			1.4	1.0
10:21:00			1.4	1.0
10:22:00			1.3	0.9
10:23:00			2.3	1.6
10:24:00			2.9	2.0
10:28:00			3.1	2.2
10:29:00			2.8	2.0
10:30:00			3.0	2.2
10:31:00			3.0	2.1
10:32:00			4.8	3.4

TIME 24 hr.	THC (1-sec Avg.) ppm	THC (10-sec Avg.) ppm	THC (1-min Avg.) ppm	THC Emissions g/min
10:33:00			5.2	3.7
10:34:00			5.8	4.1
10:35:00			4.3	3.1
10:36:00			3.3	2.3
10:37:00			3.5	2.5
10:38:00			3.6	2.6
10:39:00			3.0	2.1
10:40:00			2.7	1.9
10:41:00			2.5	1.8
10:42:00			2.3	1.7
10:43:00			2.3	1.6
10:44:00			2.2	1.5
10:45:00			2.1	1.5
10:59:00			2.9	2.1
11:00:00			3.2	2.3
11:01:00			3.4	2.4
11:02:00			2.2	1.6
11:03:00			1.9	1.3
11:04:00			3.3	2.3
11:05:00			3.7	2.6
11:06:00			4.5	3.2
11:07:00			4.6	3.3
11:08:00			3.2	2.3
11:09:00			2.8	2.0
11:10:00			3.1	2.2
11:11:00			3.3	2.3
11:12:00			3.4	2.4
11:13:00			2.4	1.7
11:14:00			3.7	2.6
11:15:00			3.9	2.8
11:16:00			4.1	2.9
11:17:00			4.6	3.3
11:18:00			5.1	3.6
11:19:00			5.3	3.8
11:20:00			3.0	2.1
11:21:00			3.5	2.5
11:22:00			3.8	2.7
11:23:00			2.7	1.9
11:24:00			2.3	1.6
11:25:00			3.6	2.5
11:26:00			3.9	2.8
11:27:00			4.2	3.0
11:31:00			5.9	4.2
11:32:00			6.5	4.6
11:33:00			3.4	2.4
11:34:00			5.0	3.6
11:35:00			6.5	4.6
11:36:00			6.5	4.6
11:37:00			3.5	2.5
11:38:00			3.2	2.3
11:39:00			5.5	3.9

TIME 24 hr.	THC (1-sec Avg.) ppm	THC (10-sec Avg.) ppm	THC (1-min Avg.) ppm	THC Emissions g/min
11:40:00			5.7	4.0
11:45:00			2.3	1.6
11:46:00			2.1	1.5
11:47:00			2.3	1.6
11:48:00			2.7	1.9
11:49:00			3.1	2.2
11:50:00			3.4	2.4
11:55:00			2.1	1.5
11:56:00			1.9	1.3
11:57:00			1.7	1.2
11:58:00			1.7	1.2
11:59:00			3.1	2.2
12:00:00			3.7	2.6
12:01:00			4.0	2.8
12:06:00			3.4	2.4
12:07:00			4.3	3.1
12:08:00			2.6	1.9
12:09:00			2.0	1.5
12:10:00			1.7	1.2
12:11:00			1.6	1.1
12:12:00			1.4	1.0
12:13:00			1.3	0.9
12:14:00			1.3	0.9
12:15:00			1.3	0.9
12:23:00			2.4	1.7
12:24:00			1.5	1.0
12:25:00			1.3	0.9
12:26:00			1.2	0.8
12:27:00			2.2	1.6
12:28:00			2.8	2.0
12:29:00			3.1	2.2
12:30:00			3.4	2.4
12:31:00			4.6	3.2
12:32:00			5.0	3.5
12:33:00			2.4	1.7
12:34:00			1.9	1.3
12:35:00			1.6	1.1
12:36:00			1.5	1.0
12:37:00			1.4	1.0
12:38:00			2.9	2.1
12:39:00			6.3	4.5
12:40:00			7.6	5.4
12:43:00			4.4	3.1
12:44:00			4.8	3.4
12:45:00			3.2	2.3
12:46:00			3.3	2.4
12:47:00			3.5	2.5
12:48:00			4.1	2.9

TIME 24 hr.	THC (1-sec Avg.) ppm	THC (10-sec Avg.) ppm	THC (1-min Avg.) ppm	THC Emissions g/min
12:49:00			4.4	3.1
12:50:00			3.1	2.2
12:51:00			2.5	1.8
12:52:00			2.4	1.7
12:53:00			3.0	2.1
12:54:00			3.5	2.5
12:55:00			3.7	2.6
12:56:00			3.9	2.8
13:00:00			6.3	4.5
13:01:00			3.5	2.5
13:02:00			4.2	3.0
13:03:00			4.5	3.2
13:04:00			4.9	3.5
13:05:00			5.0	3.5
13:06:00			4.0	2.8
13:07:00			3.5	2.5
13:08:00			3.1	2.2
13:09:00			2.9	2.1
13:10:00			2.7	1.9
13:11:00			2.7	1.9
13:12:00			2.5	1.8
13:13:00			2.5	1.8
13:14:00			2.4	1.7
13:15:00			2.1	1.5
Average Concentration (ppm) =			3.6	
Minimum Concentration (ppm) =			0.7	
Maximum Concentration (ppm) =			8.2	
Average Emission Rate[a] (g/min) =			2.5	
Minimum Emission Rate (g/min) =			0.5	
Maximum Emission Rate (g/min) =			5.8	
Length of Run (min) =			258	
Total THC, as propane, released (g) =			657	

[a] The emission rate was caluculated using a flow rate of 388 dscm/min. This is the average exhaust duct volumetric flow rate as measured by the two Method 315 sampling trains operated by PES personnel.

Plant: D (Massachusetts)
MRI Project: 4701-08-18-04 & 4951-04-05
Run No.: 3 (1-second average THC recording period)
Date: 10/07/98

TIME 24 hr.	THC (1-sec Avg.) ppm	THC (10-sec Avg.) ppm	THC (1-min Avg.) ppm	THC Emissions g/min
10:03:40	1.2			
10:03:41	1.2			
10:03:42	1.2			
10:03:43	1.2			
10:03:44	1.2			
10:03:45	1.2			
10:03:46	1.2			
10:03:47	1.2			
10:03:48	1.2			
10:03:49	1.2	1.2		
10:03:50	1.2			
10:03:51	1.2			
10:03:52	1.2			
10:03:53	1.2			
10:03:54	1.2			
10:03:55	1.2			
10:03:56	1.2			
10:03:57	1.2			
10:03:58	1.2			
10:03:59	1.2	1.2		
10:04:00	1.2			
10:04:01	1.2			
10:04:02	1.2			
10:04:03	1.2			
10:04:04	1.2			
10:04:05	1.2			
10:04:06	1.2			
10:04:07	1.2			
10:04:08	1.2			
10:04:09	1.2	1.2		
10:04:10	1.2			
10:04:11	1.2			
10:04:12	1.2			
10:04:13	1.2			
10:04:14	1.2			
10:04:15	1.2			
10:04:16	1.2			
10:04:17	1.1			
10:04:18	1.1			
10:04:19	1.1	1.2		
10:04:20	1.1			
10:04:21	1.1			
10:04:22	1.1			
10:04:23	1.1			
10:04:24	1.1			
10:04:25	1.2			

TIME 24 hr.	THC (1-sec Avg.) ppm	THC (10-sec Avg.) ppm	THC (1-min Avg.) ppm	THC Emissions g/min
10:04:26	1.2			
10:04:27	1.2			
10:04:28	1.2			
10:04:29	1.2	1.1		
10:04:30	1.2			
10:04:31	1.2			
10:04:32	1.2			
10:04:33	1.2			
10:04:34	1.2			
10:04:35	1.2			
10:04:36	1.2			
10:04:37	1.2			
10:04:38	1.2			
10:04:39	1.2	1.2	1.2	0.8
10:04:40	1.2			
10:04:41	1.2			
10:04:42	1.1			
10:04:43	1.1			
10:04:44	1.1			
10:04:45	1.1			
10:04:46	1.1			
10:04:47	1.1			
10:04:48	1.1			
10:04:49	1.1	1.1		
10:04:50	1.1			
10:04:51	1.1			
10:04:52	1.1			
10:04:53	1.1			
10:04:54	1.1			
10:04:55	1.1			
10:04:56	1.1			
10:04:57	1.1			
10:04:58	1.2			
10:04:59	1.2	1.1		
10:05:00	1.2			
10:05:01	1.3			
10:05:02	1.3			
10:05:03	1.3			
10:05:04	1.2			
10:05:05	1.2			
10:05:06	1.2			
10:05:07	1.1			
10:05:08	1.1			
10:05:09	1.1	1.2		
10:05:10	1.1			
10:05:11	1.1			
10:05:12	1.1			
10:05:13	1.1			
10:05:14	1.1			
10:05:15	1.1			
10:05:16	1.1			
10:05:17	1.1			
10:05:18	1.1			

TIME 24 hr.	THC (1-sec Avg.) ppm	THC (10-sec Avg.) ppm	THC (1-min Avg.) ppm	THC Emissions g/min
10:05:19	1.1	1.1		
10:05:20	1.1			
10:05:21	1.1			
10:05:22	1.1			
10:05:23	1.1			
10:05:24	1.1			
10:05:25	1.1			
10:05:26	1.1			
10:05:27	1.1			
10:05:28	1.1	1.1	1.1	0.8
10:06:16	1.0			
10:06:17	1.0			
10:06:18	1.0			
10:06:19	1.0			
10:06:20	1.0			
10:06:21	1.0			
10:06:22	1.0			
10:06:23	1.0			
10:06:24	1.0			
10:06:25	1.0	1.0		
10:06:26	1.0			
10:06:27	1.0			
10:06:28	1.0			
10:06:29	1.0			
10:06:30	1.0			
10:06:31	1.0			
10:06:32	1.0			
10:06:33	1.0			
10:06:34	1.0			
10:06:35	1.0	1.0		
10:06:36	1.0			
10:06:37	1.0			
10:06:38	1.0			
10:06:39	1.0			
10:06:40	1.0			
10:06:41	1.0			
10:06:42	1.0			
10:06:43	1.0			
10:06:44	1.0			
10:06:45	1.0	1.0		
10:06:46	1.0			
10:06:47	1.0			
10:06:48	1.0			
10:06:49	1.0			
10:06:50	1.0			
10:06:51	1.0			
10:06:52	1.0			
10:06:53	1.0			
10:06:54	1.0			
10:06:55	1.0	1.0		
10:06:56	1.0			
10:06:57	1.0			

TIME 24 hr.	THC (1-sec Avg.) ppm	THC (10-sec Avg.) ppm	THC (1-min Avg.) ppm	THC Emissions g/min
10:06:58	1.0			
10:06:59	1.0			
10:07:00	1.0			
10:07:01	1.0			
10:07:02	1.0			
10:07:03	1.0			
10:07:04	1.0			
10:07:05	1.0	1.0		
10:07:06	1.0			
10:07:07	1.0			
10:07:08	1.0			
10:07:09	1.0			
10:07:10	1.0			
10:07:11	1.0			
10:07:12	1.0			
10:07:13	1.0			
10:07:14	1.0			
10:07:15	1.0	1.0	1.0	0.7
10:07:16	1.0			
10:07:17	1.0			
10:07:18	1.0			
10:07:19	1.0			
10:07:20	1.0			
10:07:21	1.0			
10:07:22	1.0			
10:07:23	1.0			
10:07:24	1.0			
10:07:25	1.0	1.0		
10:07:26	1.0			
10:07:27	1.0			
10:07:28	1.0			
10:07:09	1.0			
10:07:30	1.0			
10:07:31	1.0			
10:07:32	1.0			
10:07:33	1.0			
10:07:34	1.0			
10:07:35	1.0	1.0		
10:07:36	1.0			
10:07:37	1.0			
10:07:38	1.1			
10:07:39	1.1			
10:07:40	1.1			
10:07:41	1.1			
10:07:42	1.1			
10:07:43	1.1			
10:07:44	1.0			
10:07:45	1.0	1.1		
10:07:46	1.0			
10:07:47	1.0			
10:07:48	1.0			
10:07:49	1.0			
10:07:50	1.0			

TIME 24 hr.	THC (1-sec Avg.) ppm	THC (10-sec Avg.) ppm	THC (1-min Avg.) ppm	THC Emissions g/min
10:07:51	1.0			
10:07:52	1.0			
10:07:53	1.0			
10:07:54	1.0			
10:07:55	1.0	1.0		
10:07:56	1.0			
10:07:57	1.0			
10:07:58	1.0			
10:07:59	1.0			
10:08:00	1.00			
10:08:01	1.00			
10:08:02	1.14			
10:08:03	1.11			
10:08:04	1.11			
10:08:05	1.11	1.0		
10:08:06	1.12			
10:08:07	1.19			
10:08:08	1.20			
10:08:09	1.46			
10:08:10	1.80			
10:08:11	2.19			
10:08:12	2.61			
10:08:13	3.01			
10:08:14	3.32			
10:08:15	3.58	2.1	1.2	0.9
10:08:16	3.71			
10:08:17	3.78			
10:08:18	3.79			
10:08:19	3.76			
10:08:20	3.71			
10:08:21	3.61			
10:08:22	3.54			
10:08:23	3.44			
10:08:24	3.34			
10:08:25	3.26	3.6		
10:08:26	3.17			
10:08:27	3.08			
10:08:28	3.00			
10:08:29	2.94			
10:08:30	2.86			
10:08:31	2.78			
10:08:32	2.72			
10:08:33	2.67			
10:08:34	2.62			
10:08:35	2.56	2.8		
10:08:36	2.51			
10:08:37	2.46			
10:08:38	2.42			
10:08:39	2.37			
10:08:40	2.32			
10:08:41	2.29			
10:08:42	2.25			
10:08:43	2.23			

TIME 24 hr.	THC (1-sec Avg.) ppm	THC (10-sec Avg.) ppm	THC (1-min Avg.) ppm	THC Emissions g/min
10:08:44	2.20			
10:08:45	2.16	2.3		
10:08:46	2.14			
10:08:47	2.12			
10:08:48	2.08			
10:08:49	2.06			
10:08:50	2.04			
10:08:51	2.03			
10:08:52	2.01			
10:08:53	1.99			
10:08:54	1.99			
10:08:55	1.98	2.0		
10:08:56	1.96			
10:08:57	1.96			
10:08:58	1.95			
10:08:59	1.93			
10:09:00	1.92			
10:09:01	1.91			
10:09:02	1.90			
10:09:03	1.88			
10:09:04	1.87			
10:09:05	1.86	1.9		
10:09:06	1.84			
10:09:07	1.82			
10:09:08	1.81			
10:09:09	1.79			
10:09:10	1.78			
10:09:11	1.77			
10:09:12	1.79			
10:09:13	1.86			
10:09:14	2.03			
10:09:15	2.29	1.9	2.4	1.7
10:09:16	2.63			
10:09:17	3.04			
10:09:18	3.46			
10:09:19	3.82			
10:09:20	4.12			
10:09:21	4.33			
10:09:22	4.43			
10:09:23	4.44			
10:09:24	4.40			
10:09:25	4.35	3.9		
10:09:26	4.29			
10:09:27	4.17			
10:09:28	4.09			
10:09:20	4.00			
10:09:30	3.92			
10:09:31	3.83			
10:09:32	3.74			
10:09:33	3.67			
10:09:34	3.59			
10:09:35	3.52	3.9		
10:09:36	3.43			

TIME 24 hr.	THC (1-sec Avg.) ppm	THC (10-sec Avg.) ppm	THC (1-min Avg.) ppm	THC Emissions g/min
10:09:37	3.36			
10:09:38	3.30			
10:09:39	3.24			
10:09:40	3.18			
10:09:41	3.14			
10:09:42	3.09			
10:09:43	3.06			
10:09:44	3.02			
10:09:45	2.97	3.2		
10:09:46	2.93			
10:09:47	2.88			
10:09:48	2.85			
10:09:49	2.81			
10:09:50	2.77			
10:09:51	2.73			
10:09:52	2.70			
10:09:53	2.68			
10:09:54	2.64			
10:09:55	2.62	2.8		
10:09:56	2.60			
10:09:57	2.59			
10:09:58	2.57			
10:09:59	2.56			
10:10:00	2.54			
10:10:01	2.52			
10:10:02	2.50			
10:10:03	2.48			
10:10:04	2.47			
10:10:05	2.43	2.5		
10:10:06	2.43			
10:10:07	2.40			
10:10:08	2.38			
10:10:09	2.36			
10:10:10	2.34			
10:10:11	2.34			
10:10:12	2.34			
10:10:13	2.33			
10:10:14	2.33			
10:10:15	2.31	2.4	3.1	2.2
10:10:16	2.30			
10:10:17	2.29			
10:10:18	2.29			
10:10:19	2.36			
10:10:20	2.51			
10:10:21	2.78			
10:10:22	3.10			
10:10:23	3.51			
10:10:24	3.93			
10:10:25	4.30	2.9		
10:10:26	4.56			
10:10:27	4.72			
10:10:28	4.80			
10:10:29	4.81			

TIME 24 hr.	THC (1-sec Avg.) ppm	THC (10-sec Avg.) ppm	THC (1-min Avg.) ppm	THC Emissions g/min
10:10:30	4.78			
10:10:31	4.72			
10:10:32	4.67			
10:10:33	4.61			
10:10:34	4.54			
10:10:35	4.46	4.7		
10:10:36	4.36			
10:10:37	4.28			
10:10:38	4.20			
10:10:39	4.12			
10:10:40	4.03			
10:10:41	3.95			
10:10:42	3.87			
10:10:43	3.79			
10:10:44	3.72			
10:10:45	3.65	4.0		
10:10:46	3.61			
10:10:47	3.55			
10:10:48	3.50			
10:10:49	3.45			
10:10:50	3.41			
10:10:51	3.36			
10:10:52	3.31			
10:10:53	3.27			
10:10:54	3.24			
10:10:55	3.19	3.4		
10:10:56	3.14			
10:10:57	3.11			
10:10:58	3.08			
10:10:59	3.04			
10:11:00	3.00			
10:11:01	2.98			
10:11:02	2.96			
10:11:03	2.93			
10:11:04	2.90			
10:11:05	2.88	3.0		
10:11:06	2.86			
10:11:07	2.83			
10:11:08	2.80			
10:11:09	2.78			
10:11:10	2.77			
10:11:11	2.74			
10:11:12	2.71			
10:11:13	2.69			
10:11:14	2.68			
10:11:15	2.65	2.8	3.5	2.5
10:11:16	2.64			
10:11:17	2.61			
10:11:18	2.61			
10:11:19	2.60			
10:11:20	2.59			
10:11:21	2.58			
10:11:22	2.57			

TIME 24 hr.	THC (1-sec Avg.) ppm	THC (10-sec Avg.) ppm	THC (1-min Avg.) ppm	THC Emissions g/min
10:11:23	2.57			
10:11:24	2.59			
10:11:25	2.68	2.6		
10:11:26	2.86			
10:11:27	3.14			
10:11:28	3.49			
10:11:29	3.91			
10:11:30	4.32			
10:11:31	4.68			
10:11:32	4.92			
10:11:33	5.05			
10:11:34	5.08			
10:11:35	5.02	4.2		
10:11:36	4.92			
10:11:37	4.80			
10:11:38	4.70			
10:11:39	4.59			
10:11:40	4.49			
10:11:41	4.40			
10:11:42	4.32			
10:11:43	4.25			
10:11:44	4.17			
10:11:45	4.10	4.5		
10:11:46	4.03			
10:11:47	3.96			
10:11:48	3.87			
10:11:49	3.81			
10:11:50	3.74			
10:11:51	3.68			
10:11:52	3.62			
10:11:53	3.56			
10:11:54	3.53			
10:11:55	3.48	3.7		
10:11:56	3.44			
10:11:57	3.41			
10:11:58	3.38			
10:11:59	3.34			
10:12:00	3.31			
10:12:01	3.26			
10:12:02	3.21			
10:12:03	3.18			
10:12:04	3.15			
10:12:05	3.13	3.3		
10:12:06	3.09			
10:12:07	3.08			
10:12:08	3.06			
10:12:09	3.04			
10:12:10	3.03			
10:12:11	3.00			
10:12:12	2.98			
10:12:13	2.96			
10:12:14	2.95			
10:12:15	2.92	3.0	3.6	2.5

TIME 24 hr.	THC (1-sec Avg.) ppm	THC (10-sec Avg.) ppm	THC (1-min Avg.) ppm	THC Emissions g/min
10:12:16	2.90			
10:12:17	2.88			
10:12:18	2.87			
10:12:19	2.85			
10:12:20	2.82			
10:12:21	2.81			
10:12:22	2.78			
10:12:23	2.77			
10:12:24	2.73			
10:12:25	2.73	2.8		
10:12:26	2.72			
10:12:27	2.70			
10:12:28	2.69			
10:12:29	2.67			
10:12:30	2.70			
10:12:31	2.79			
10:12:32	2.95			
10:12:33	3.17			
10:12:34	3.44			
10:12:35	3.73	3.0		
10:12:36	3.99			
10:12:37	4.18			
10:12:38	4.30			
10:12:39	4.35			
10:12:40	4.35			
10:12:41	4.31			
10:12:42	4.26			
10:12:43	4.19			
10:12:44	4.13			
10:12:45	4.04	4.2		
10:12:46	3.97			
10:12:47	3.91			
10:12:48	3.82			
10:12:49	3.77			
10:12:50	3.71			
10:12:51	3.66			
10:12:52	3.61			
10:12:53	3.56			
10:12:54	3.53			
10:12:55	3.47	3.7		
10:12:56	3.43			
10:12:57	3.39			
10:12:58	3.36			
10:12:59	3.30			
10:13:00	3.3			
10:13:01	3.3			
10:13:02	3.3			
10:13:03	3.3			
10:13:04	3.2			
10:13:05	3.2	3.3		
10:13:06	3.2			
10:13:07	3.1			
10:13:08	3.2			

TIME 24 hr.	THC (1-sec Avg.) ppm	THC (10-sec Avg.) ppm	THC (1-min Avg.) ppm	THC Emissions g/min
10:13:09	3.2			
10:13:10	3.1			
10:13:11	3.1			
10:13:12	3.1			
10:13:13	3.0			
10:13:14	2.9			
10:13:15	2.9	3.1	3.3	2.4
10:13:16	2.9			
10:13:17	2.8			
10:13:18	2.8			
10:13:19	2.8			
10:13:20	2.8			
10:13:21	2.8			
10:13:21	2.8			
10:13:23	2.8			
10:13:24	2.8			
10:13:25	2.7	2.8		
10:13:26	2.7			
10:13:27	2.7			
10:13:28	2.7			
10:13:29	2.7			
10:13:30	2.7			
10:13:31	2.7			
10:13:32	2.7			
10:13:33	2.7			
10:13:34	2.6			
10:13:35	2.6	2.7		
10:13:36	2.6			
10:13:37	2.6			
10:13:38	2.6			
10:13:39	2.6			
10:13:40	2.6			
10:13:41	2.6			
10:13:42	2.5			
10:13:43	2.5			
10:13:44	2.5			
10:13:45	2.5	2.6		
10:13:46	2.5			
10:13:47	2.5			
10:13:48	2.5			
10:13:49	2.5			
10:13:50	2.5			
10:13:51	2.5			
10:13:52	2.5			
10:13:53	2.5			
10:13:54	2.5			
10:13:55	2.5	2.5		
10:13:56	2.4			
10:13:57	2.4			
10:13:58	2.4			
10:13:59	2.4			
10:14:00	2.4			
10:14:01	2.4			

TIME 24 hr.	THC (1-sec Avg.) ppm	THC (10-sec Avg.) ppm	THC (1-min Avg.) ppm	THC Emissions g/min
10:14:02	2.4			
10:14:03	2.4			
10:14:04	2.4			
10:14:05	2.4	2.4		
10:14:06	2.4			
10:14:07	2.4			
10:14:08	2.4			
10:14:09	2.4			
10:14:10	2.4			
10:14:11	2.3			
10:14:12	2.3			
10:14:13	2.3			
10:14:14	2.3			
10:14:15	2.3	2.3	2.6	1.8
10:14:16	2.3			
10:14:17	2.3			
10:14:18	2.3			
10:14:19	2.3			
10:14:20	2.3			
10:14:21	2.3			
10:14:22	2.5			
10:14:23	2.7			
10:14:24	3.1			
10:14:25	3.6	2.6		
10:14:26	4.1			
10:14:27	4.6			
10:14:28	5.0			
10:14:29	5.3			
10:14:30	5.4			
10:14:31	5.4			
10:14:32	5.3			
10:14:33	5.2			
10:14:34	5.0			
10:14:35	4.8	5.0		
10:14:36	4.7			
10:14:37	4.6			
10:14:38	4.5			
10:14:39	4.4			
10:14:40	4.3			
10:14:41	4.2			
10:14:42	4.1			
10:14:43	4.0			
10:14:44	3.9			
10:14:45	3.8	4.2		
10:14:46	3.8			
10:14:47	3.7			
10:14:48	3.7			
10:14:49	3.6			
10:14:50	3.5			
10:14:51	3.5			
10:14:52	3.5			
10:14:53	3.4			
10:14:54	3.4			

TIME 24 hr.	THC (1-sec Avg.) ppm	THC (10-sec Avg.) ppm	THC (1-min Avg.) ppm	THC Emissions g/min
10:14:55	3.3	3.5		
10:14:56	3.3			
10:14:57	3.2			
10:14:58	3.2			
10:14:59	3.2			
10:15:00	3.1			
10:15:01	3.1			
10:15:02	3.1			
10:15:03	3.0			
10:15:04	3.0			
10:15:05	3.0	3.1		
10:15:06	3.0			
10:15:07	3.0			
10:15:08	3.0			
10:15:09	2.9			
10:15:10	2.9			
10:15:11	2.9			
10:15:12	2.9			
10:15:13	2.9			
10:15:14	2.8			
10:15:15	2.8	2.9	3.6	2.5
10:15:16	2.8			
10:15:17	2.8			
10:15:18	2.8			
10:15:19	2.8			
10:15:20	2.8			
10:15:21	2.8			
10:15:22	2.8			
10:15:23	2.7			
10:15:24	2.7			
10:15:25	2.7	2.8		
10:15:26	2.7			
10:15:27	2.8			
10:15:28	2.9			
10:15:29	3.2			
10:15:30	3.5			
10:15:31	3.9			
10:15:32	4.3			
10:15:33	4.7			
10:15:34	5.0			
10:15:35	5.1	3.8		
10:15:36	5.2			
10:15:37	5.2			
10:15:38	5.1			
10:15:39	5.0			
10:15:40	4.9			
10:15:41	4.8			
10:15:42	4.6			
10:15:43	4.5			
10:15:44	4.5			
10:15:45	4.4	4.8		
10:15:46	4.3			
10:15:47	4.2			

TIME 24 hr.	THC (1-sec Avg.) ppm	THC (10-sec Avg.) ppm	THC (1-min Avg.) ppm	THC Emissions g/min
10:15:48	4.1			
10:15:49	4.0			
10:15:50	4.0			
10:15:51	3.9			
10:15:52	3.8			
10:15:53	3.8			
10:15:54	3.7			
10:15:55	3.7	3.9		
10:15:56	3.6			
10:15:57	3.6			
10:15:58	3.5			
10:15:59	3.5			
10:16:00	3.5			
10:16:01	3.4			
10:16:02	3.4			
10:16:03	3.4			
10:16:04	3.4			
10:16:05	3.3	3.5		
10:16:06	3.3			
10:16:07	3.3			
10:16:08	3.2			
10:16:09	3.2			
10:16:10	3.2			
10:16:11	3.2			
10:16:12	3.1			
10:16:13	3.1			
10:16:14	3.1			
10:16:15	3.1	3.2	3.7	2.6
10:16:16	3.1			
10:16:17	3.0			
10:16:18	3.0			
10:16:19	3.0			
10:16:20	3.0			
10:16:21	3.0			
10:16:22	3.0			
10:16:23	3.0			
10:16:24	2.9			
10:16:25	2.9	3.0		
10:16:26	2.9			
10:16:27	2.9			
10:16:28	2.9			
10:16:29	2.9			
10:16:30	2.9			
10:16:31	2.9			
10:16:32	2.9			
10:16:33	2.8			
10:16:34	2.8			
10:16:35	2.8	2.9		
10:16:36	2.8			
10:16:37	2.8			
10:16:38	2.7			
10:16:39	2.7			
10:16:40	2.7			

TIME 24 hr.	THC (1-sec Avg.) ppm	THC (10-sec Avg.) ppm	THC (1-min Avg.) ppm	THC Emissions g/min
10:16:41	2.7			
10:16:42	2.7			
10:16:43	2.7			
10:16:44	2.7			
10:16:45	2.7	2.7		
10:16:46	2.7			
10:16:47	2.7			
10:16:48	2.7			
10:16:49	2.7			
10:16:50	2.8			
10:16:51	2.9			
10:16:52	3.2			
10:16:53	3.5			
10:16:54	3.9			
10:16:55	4.2	3.1		
10:16:56	4.6			
10:16:57	4.8			
10:16:58	4.9			
10:16:59	4.9			
10:17:00	4.8			
10:17:01	4.7			
10:17:02	4.6			
10:17:03	4.5			
10:17:04	4.5			
10:17:05	4.4	4.7		
10:17:06	4.3			
10:17:07	4.2			
10:17:08	4.2			
10:17:09	4.1			
10:17:10	4.0			
10:17:11	4.0			
10:17:12	3.9			
10:17:13	3.8			
10:17:14	3.8			
10:17:15	3.7	4.0	3.4	2.4
10:17:16	3.7			
10:17:17	3.6			
10:17:18	3.6			
10:17:19	3.5			
10:17:20	3.5			
10:17:21	3.4			
10:17:22	3.4			
10:17:23	3.4			
10:17:24	3.3			
10:17:25	3.3	3.5		
10:17:26	3.3			
10:17:27	3.3			
10:17:28	3.2			
10:17:29	3.2			
10:17:30	3.2			
10:17:31	3.1			
10:17:32	3.1			
10:17:33	3.1			

TIME 24 hr.	THC (1-sec Avg.) ppm	THC (10-sec Avg.) ppm	THC (1-min Avg.) ppm	THC Emissions g/min
10:17:34	3.1			
10:17:35	3.1	3.2		
10:17:36	3.1			
10:17:37	3.0			
10:17:38	3.0			
10:17:39	3.0			
10:17:40	2.9			
10:17:41	2.9			
10:17:42	2.9			
10:17:43	2.8			
10:17:44	2.8			
10:17:45	2.8	2.9		
10:17:46	2.8			
10:17:47	2.8			
10:17:48	2.7			
10:17:49	2.7			
10:17:50	2.7			
10:17:51	2.7			
10:17:52	2.6			
10:17:53	2.6			
10:17:54	2.6			
10:17:55	2.6	2.7		
10:17:56	2.6			
10:17:57	2.6			
10:17:58	2.5			
10:17:59	2.5			
10:18:00	2.5			
10:18:01	2.5			
10:18:02	2.5			
10:18:03	2.5			
10:18:04	2.4			
10:18:05	2.4	2.5		
10:18:06	2.4			
10:18:07	2.4			
10:18:08	2.4			
10:18:09	2.3		2.9	2.1
Average THC Concentration =	2.6	2.6	2.6	

Appendix C

Exhaust Gas Flowrates (from PES)

Run 1

TABLE 2.5

PARTICULATE & MCEM SAMPLING AND AIR STREAM TTE EXHAUST AND EXHAUST HOT MIX ASPHALT PLANT D - BARRE, MASSACHUSETTS

Run No.	M315-1	M315-6
Date	10/5/98	10/5/98
Total Sampling Time, minutes	240	240
Average Sampling Rate, dscfm [a]	0.695	0.754
Sample Volume:		
dscf [b]	166.863	181.042
dscm [c]	4.725	5.127
Average Exhaust Gas Temperature, °F	59	60
O_2 Concentration, % by Volume	20.9	20.9
CO_2 Concentration, % by Volume	0.0	0.0
Moisture, % by Volume	0.7	0.6
Exhaust Gas Volumetric Flow Rate:		
acfm [d]	15,300	15,400
dscfm [a]	15,400	15,500
dscmm [e]	435	439
Isokinetic Sampling Ratio, %	90.0	95.9

avg = 15,450
437

PSM 12/14/98

[a] Dry standard cubic feet per minute at 68° F (20° C) and 1 atm.
[b] Dry standard cubic feet at 68° F (20° C) and 1 atm.
[c] Dry standard cubic meters at 68° F (20° C) and 1 atm.
[d] Actual cubic feet per minute at exhaust gas conditions.
[e] Dry standard cubic meters per minute at 68° F (20° C) and 1 atm.

Run 2

TABLE 2.5

PARTICULATE & MCEM SAMPLING AND AIR STREAM TTE EXHAUST AND EXHAUST HOT MIX ASPHALT PLANT D - BARRE, MASSACHUSETTS

Run No.	M315-2	M315-7
Date	10/6/98	10/6/98
Total Sampling Time, minutes	247.5166667	246.9
Average Sampling Rate, dscfm [a]	0.695	0.714
Sample Volume:		
dscf [b]	172.033	176.253
dscm [c]	4.871	4.991
Average Exhaust Gas Temperature, °F	57	58
O_2 Concentration, % by Volume	20.9	20.9
CO_2 Concentration, % by Volume	0.0	0.0
Moisture, % by Volume	0.5	0.3
Exhaust Gas Volumetric Flow Rate:		
acfm [d]	13,900	14,400
dscfm [a]	14,100	14,600
dscmm [e]	400	415
Isokinetic Sampling Ratio, %	97.9	100.2

avg = 4

PSM 12/14/

[a] Dry standard cubic feet per minute at 68° F (20° C) and 1 atm.
[b] Dry standard cubic feet at 68° F (20° C) and 1 atm.
[c] Dry standard cubic meters at 68° F (20° C) and 1 atm.
[d] Actual cubic feet per minute at exhaust gas conditions.
[e] Dry standard cubic meters per minute at 68° F (20° C) and 1 atm.

Run 3

TABLE 2.5

PARTICULATE & MCEM SAMPLING AND AIR STREAM TTE EXHAUST AND EXHAUST HOT MIX ASPHALT PLANT D - BARRE, MASSACHUSETTS

Run No.	M315-3	M315-8
Date	10/7/98	10/7/98
Total Sampling Time, minutes	250.7333333	250.1
Average Sampling Rate, dscfm [a]	0.692	0.666
Sample Volume:		
dscf [b]	173.427	166.637
dscm [c]	4.911	4.719
Average Exhaust Gas Temperature, °F	54	55
O_2 Concentration, % by Volume	20.9	20.9
CO_2 Concentration, % by Volume	0.0	0.0
Moisture, % by Volume	0.6	0.7
Exhaust Gas Volumetric Flow Rate:		
acfm [d]	13,700	13,200
dscfm [a]	14,000	13,400
dscmm [e]	395	380
Isokinetic Sampling Ratio, %	98.6	99.8

avg = 13,700
380

PSM
12/14/98

[a] Dry standard cubic feet per minute at 68° F (20° C) and 1 atm.
[b] Dry standard cubic feet at 68° F (20° C) and 1 atm.
[c] Dry standard cubic meters at 68° F (20° C) and 1 atm.
[d] Actual cubic feet per minute at exhaust gas conditions.
[e] Dry standard cubic meters per minute at 68° F (20° C) and 1 atm.

Appendix D

Loadout Data Summaries

Table D-1. Summary of Truck Loading Data for Run 1

Truck #	Asphalt Type	Mix Temp. (°F)	Stack Temp. (°F)	Weight of Load (lbs)	
1	30	361	247	48,093	
2	30	417	226	64,180	
3	30	393	235	40,376	a
4	30	353	186	48,081	
5	30	201	115	48,776	
6	30	340	297	48,495	
7	30	401	249	48,139	
8	30	391	235	66,647	
9	30	400	212	48,644	
10	30	364	229	48,398	
11	16	385	220	48,150	
12	30	364	248	48,213	
13	30	355	283	48,358	
14	8	377	247	8,151	
15	30	370	249	40,380	b
16	30	391	248	66,265	
17	30	373	245	64,332	
18	30	378	245	48,334	
19	30	367	231	47,975	
20	30	383	241	48,496	
21	30	387	230		c
22	30	298	174	48,741	
23	30	379	254	66,365	
24	30	385	253	64,312	
25	30	392	251	48,613	
26	30	387	246	48,125	
27	30	407	244	48,319	
28	67	396	270	20,149	
29	30	385	285	48,626	
30	30	396	286	48,521	
31	30	424	263	65,814	
32	30	398	258	40,754	d
33	30	393	259		c
34	67	418	269		c
35	30	449	195		c
36	30	383	259		c
37	2	e	e	31,894	a
Average Temperature =		379	241		
Total Asphalt Loaded during THC Sampling =				1,558,716	

[a] THC monitor offline during last drop to the truck, weight does not include this drop.

[b] TTE not secured for first drop to the truck, weight does not include this drop.

[c] THC monitor offline during truck loading.

[d] THC monitor offline during last three drops to the truck, weight does not include these drops.

[e] Plant down, readings not available.

Table D-2. Summary of Truck Loading Data for Run 2

Truck #	Asphalt Type	Mix Temp. (°F)	Stack Temp. (°F)	Weight of Load (lbs)	
1	24	387	351	48,114	
2	16	400	360	48,233	
3	24	404	321	48,088	
4	8	419	306	40,437	
5	24	413	286	66,095	
6	24	396	302	66,196	
7	24	399	302	48,131	
8	8	402	316	40,226	
9	24	404	342	63,645	
10	24	386	359	48,094	
11	67	411	337	20,014	
12	24	386	348	48,077	
13	24	391	370	47,960	
14	16	404	326	39,969	a
15	33	449	255	34,130	
16	24	410	214	48,081	
17	24	411	265	39,919	b
18	24	404	311	65,766	
19	24	416	302	65,858	
20	24	385	277	66,064	
21	24	394	284	64,046	
22	24	390	307	47,914	
23	24	412	297		c
24	24	393	297		c
25	24	401	288		c
26	24	391	284	66,033	
27	33	392	279	30,446	
28	16	383	283	47,925	
29	24	389	278	48,186	
30	24	393	273	65,967	
31	33	403	309	2,169	
32	24	208	127	48,720	
33	24	376	260	63,726	
34	24	400	307	64,141	
35	24	410	320	63,838	
36	24	391	303	16,196	d
Average Temperature =		395	299		
Total Asphalt Loaded during THC Sampling =				1,622,404	

[a] TTE not secured for first drop to the truck, weight does not include this drop.

[b] THC monitor offline during first drop to the truck, weight does not include this drop. A truck loading data sheet was not provided, therefore a 8,000 lb first drop weight was assumed.

[c] THC monitor offline during truck loading.

[d] THC monitor offline during last four drops to the truck, weight does not include these drops.

Table D-3. Summary of Truck Loading Data for Run 3

Truck #	Asphalt Type	Mix Temp. (°F)	Stack Temp. (°F)	Weight of Load (lbs)
1	16	398	228	48,569
2	30	391	233	48,358
3	25	411	255	66,121
4	25	408	241	66,131
5	25	405	258	66,248
6	25	407	331	48,289
7	25	425	292	64,090
8	25	387	290	63,819
9	60	441	266	17,966
10	25	414	299	65,939
11	25	421	280	65,934
12	25	403	312	48,078
13	25	406	304	48,082
14	16	401	321	47,966
15	33	398	318	20,123
16	33	396	319	20,005
17	25	253	129	40,198 [a]
18	25	147	88	65,744
19	25	267	136	66,394
20	25	419	290	66,071
21	25	408	280	40,047 [b]
22	25	187	127	64,072
23	25	424	263	64,275
24	25	401	299	47,935
25	25	409	299	66,241
26	18	357	368	30,211
27	25	383	321	48,168
28	25	[c]	[c]	66,025
29	33	359	311	11,947
30	25	401	349	48,124
31	16	394	350	47,996
32	33	381	340	20,069
33	25	420	296	65,886
34	2	410	303	32,121
Average Temperature =		380	276	
Total Asphalt Loaded during THC Sampling =				1,697,242

[a] THC monitor offline during fourth drop to the truck, weight does not include this drop.

[b] TTE not secured for first drop to the truck, weight does not include this drop.

[c] Plant down, readings not available.

Appendix E

Raw Loadout Data Sheets

99340-E04-01

ASPHALT PLANT D
BARRE, MA
RUN #1

RUN #1
Date: 10-5-98
JOSH BERKOWITZ
FRANK PHOENIX

ASPHALT TEMP PER THERMOMETER

Truck Count	TEST TIME START*	STOP	JOB #	TRUCK #	MIX TEMP °F	STACK TEMP °F	MIX ←
1	7:21	7:27	3089	LC 751	361	247	30
2	7:29	7:39	3089	LC 543	417	226	30
3	7:41	7:47	3089	LC 752	393	235	30
4	7:57	8:04	3089	LC 757	353	186	30
5	8:04	8:15	3089	COS	201	115	30
6	8:17	8:23	3089	WAD	340	297	30
7	8:25	8:33	3089	5G	401	249	30
8	8:37	8:45	3089	LC 542	375	224	30
SAME TRUCK	8:47	8:50	3089	LC 542	407	230	30
9	9:06	9:12	3089	LC 752	400	212	→ TRUCK
10	9:14	9:20	3089	LC752	364	229	30 NOT
9:27	→ ~~9:20~~	9:27	2959	~~30~~ YOU	385	220	16 (321) DAM
12	9:28	9:34	3089	LC757	364	248	30 ← 32 C
13	9:35	9:41	3089	WAD	355	283	30 (290)
14	9:42	9:43	9999	3	377	247	8 → NO
15	9:45	9:51	3089	5G	370	249	30 → STA
16	9:52	10:00	3089	LC542	391	248	30
17	10:01	10:09	3089	LC543	373	245	30 → miss
18	10:10	10:17	3089	LC 751	378	245	30 (280) 1ST
19	10:25	10:31	3089	BLK	367	231	30 (290)
0:33 20	10:38	10:38	3089	LC 757	383	241	30
21	10:46	10:51	3089	WAD	387	230	30 (294) KEEP PROB
22	10:54	11:02	3089	5G	270	137	30 → PLAN
	10:05	10:06	3089	WAD	326	210	30 PROB
23	10:08	10:17	3089	LC 542	379	254	30 (290)
24	10:18	10:28	3089	LC 543	385	253	30
25	11:29	11:35	3089	LC 751	392	251	30 (299)
26	11:36	11:41	3089	LC752	387	246	30
27	11:42	11:48	3089	LC757	407	244	30 (303)
28	11:56	11:59	8888	4 WAD	396	270	67
29	12:00	12:06	3089	WAD ~~3089~~ 2	385	285	30 (310)
30	12:07	12:13	3089	5G	396	286	30 (310)
31	12:14	12:22	3089	LC 542	424	263	30
32	12:23	12:30	3089	LC543	398	258	30 (313)
33	12:32	12:37	3089	LC751	393	259	30
34	12:40	12:44	9999	2	418	269	67
35	12:46	12:51	3089	LC 757	449	195	30
36	12:52	12:59	3089	WAD	283	259	30
37	13:52	14:03	9999	3	—	—	82
					PROCESS OFF LINE	PLANT	

PSM 12-14 Truck Number was recorded instead of Mix #

ONE LAST JOB

* 2 MINUTE DIFFERENCE LOG PRINTOUT REFLECTS TWO MINUTES SLOW

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355 2952

Customer
LORUSSO CORP.
3 BELCHER ST.
PLAINVILLE, MASS.
02762

Job
BAY STATE HOMES
CRAWFORD RD.
OAKHAM

Cust# 1
Job# 3089
Truck# LC 751
Mix# 30
Name STATE BINDER 10% PA
Operator
Ticket# 9398

Time	Agg T	AGG 4	AGG 5	AGG 3	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		2780	800	740	800	2520			352		8000
7:19:05	10	2770	780	740	840	2480	7610	16	355	355	7965
7:19:59	20	2820	820	710	830	2540	7720	13	351	351	16036
7:21:41	20	2880	790	760	790	2480	7700	15	355	355	24091
7:22:47	20	2710	830	750	830	2480	7600	14	351	351	32042
7:23:53	10	2770	800	800	820	2540	7730	13	352	352	40124
7:25:00	-10	2720	790	720	850	2540	7620	14	349	349	48093

Agg Tare Asp Tare

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
5	129.84	07:25:52 10/05/98	F	2

Truck #2

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

Lower
RUSSO CORP.
BELCHER ST.
LINVILLE, MASS.
02

Job
BAY STATE HOMES
CRAWFORD RD.
OAKHAM

Cust# 1
Job# 3089
Truck# LC 543
Mix# 30
Name STATE BINDER 10% RAP
Operator
Ticket# 9069

Time	Agg T	AGG 4	AGG 5	AGG 3	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		2730	800	748	800	2530			352		8000
30:17	-10	2810	790	740	780	2510	7630	6	357	357	7987
31:00	20	2820	810	770	820	2500	7720	14	350	350	16057
32:06	30	2790	820	730	800	2510	7650	15	352	352	24059
33:12	20	2810	800	790	810	2540	7750	15	350	350	32159
34:16	30	2770	810	700	790	2490	7560	15	350	350	40069
35:24	30	2730	780	750	800	2510	7570	15	356	356	47995
36:30	30	2800	780	730	820	2570	7700	18	353	353	56048
37:37	30	2840	790	760	830	2560	7780	16	352	352	64180
Tare		Asp Tare									

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Rest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
6	161.93	07:38:30 10/05/98	F	2

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

Customer
LORUSSO CORP.
3 BELCHER ST.
PLAINVILLE, MASS.
02762

Job
BAY STATE HOMES
CRAWFORD RD.
OAKHAM

Custr 1
Job# 3089
Truck# LC 752
Mix# 30
Name STATE BINDER 10% RAP
Operator
Ticket# 9350

Time	Agg T	AGG 4	AGG 5	AGG 3	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		2780	800	748	800	2520			352		8000
7:39:03	20	2720	780	780	820	2580	7680	16	355	355	8035
7:39:51	40	2870	830	750	850	2590	7890	15	350	350	16275
7:41:22	40	2820	810	680	830	2510	7650	16	351	351	24276
7:42:28	50	2860	810	760	820	2460	7710	15	349	349	32335
7:43:34	0	2760	760	780	810	2580	7690	15	351	351	40376
7:44:40	30	2770	790	740	810	2460	7570	15	357	357	48303

Agg Tare Asp Tare

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
7	186.08	07:45:33 10/05/98	F	2

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

stomer
DRUSSO CORP.
BELCHER ST.
AINVILLE, MASS.
2762

Job
BAY STATE HOMES
CRANFORD RD.
OAKHAM

Cust# 1
Job# 3089
Truck# LC 757
Mix# 30
Name STATE BINDER 10% RAP
Operator
Ticket# 9391

Time	Agg T	AGG 4	AGG 5	AGG 3	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		2780	800	748	800	2520			352		8000
7:56:49	0	2780	820	750	790	2550	7690	7	355	355	8045
7:57:30	30	2820	790	730	820	2490	7650	16	351	351	16046
7:58:37	10	2750	780	770	790	2510	7600	17	350	350	23996
7:59:43	30	2830	800	740	830	2510	7710	15	355	355	32061
8:00:51	20	2810	810	770	820	2540	7750	16	349	349	40160
8:01:57	30	2770	830	700	780	2490	7570	16	351	351	48081

) Tare Asp Tare

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
8	210.12	08:02:50 10/05/98	F	2

Truck 5

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

Customer
LORUSSO CORP.
3 BELCHER ST.
PLAINVILLE, MASS.
02762

Job
BAY STATE HOMES
CRAWFORD RD.
OAKHAM

Cust# 1
Job# 3089
Truck# C05
Mix# 30
Name STATE BINDER 12% RAP
Operator
Ticket# 9392

Time	Agg T	AGG 4	AGG 5	AGG 3	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		2780	800	740	840	2520			352		8000
8:08:12	0	2830	800	720	790	2530	7670	9	360	360	8030
8:09:13	20	2770	790	730	790	2520	7600	16	350	350	15980
8:10:19	30	2780	810	770	830	2580	7770	18	350	350	24100
8:11:26	40	2880	780	740	790	2530	7723	18	356	356	32176
8:12:32	40	3060	780	770	850	2520	7980	17	350	350	40506
8:13:38	30	2860	810	760	860	2630	7920	17	350	350	48776

Agg Tare Asp Tare

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
9	234.51	08:14:31 10/05/98	F	2

CENTRAL MASS. ASPHALT CO
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

tower
RUSSO CORP.
BELCHER ST.
AINVILLE, MASS.
762

Job
BAY STATE HOMES
CRAWFORD RD.
OAKHAM

Cust# 1
Job# 3089
Truck# KAD
Mix# 30
Name STATE BINDER 10% RAP
Operator
Ticket# 9393

Time	Agg T	AGG 4	AGG 5	AGG 3	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		2780	800	748	800	2520			352		8000
:15:49	0	2910	820	700	780	2440	7650	9	356	356	8006
:16:42	10	2750	810	770	840	2490	7660	16	346	346	16012
:17:50	70	2930	790	780	810	2560	7890	17	353	353	24255
:18:55	30	2850	790	770	820	2560	7790	15	352	352	32397
:20:01	30	2820	800	750	830	2510	7710	15	349	349	40456
:21:07	30	2790	780	760	810	2550	7690	17	349	349	48495
Tare		Asp Tare									

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
10	258.76	08:22:00 10/05/98	F	2

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

Customer
LORUSSO CORP.
3 BELCHER ST.
PLAINVILLE, MASS.
02762

Job
BAY STATE HOMES
CRAWFORD RD.
OAKHAM

Cust# 1
Job# 3464
Truck# 5 6
Mix# 30
Name STATE BINDER 10% RAP
Operator
Ticket# 3294

Time	Agg T	AGG 4	AGG 5	AGG 3	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		2700	800	740	800	2520			352		8000
8:24:39	0	2790	820	740	800	2470	7620	0	362	362	7982
8:26:23	30	2860	800	730	840	2460	7690	16	348	348	16020
8:27:36	20	2700	840	770	800	2530	7640	15	353	353	24013
8:28:42	30	2770	780	700	780	2510	7540	16	351	351	31904
8:29:48	30	2750	810	750	820	2520	7650	16	355	355	39909
8:30:54	40	2950	800	780	850	2490	7880	16	350	350	48139

Agg Tare Asp Tare

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
11	282.83	08:31:47 10/05/98	F	2

Truck # 5

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

toner
RUSSO CORP.
BELCHER ST.
ATHOLVILLE, MASS.
762

Job
BAY STATE HOMES
CRAWFORD RD.
OAKHAM

Cust# 1
Job# 3089
Truck# LC 542
Mix# 30
Name STATE BINDER 10% RAP
Operator
Ticket# 9395

Time	Agg T	AGG 4	AGG 5	AGG 3	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		2867	825	771	825	2599			363		8250
:35:47	-10	2940	830	770	840	2590	7970	7	357	367	8337
:36:32	40	2950	830	770	840	2580	7970	14	363	363	16670
:37:38	30	2860	820	760	830	2650	7920	15	362	362	24952
:38:45	20	2860	850	810	820	2650	7990	14	357	357	33299
:39:51	30	2870	840	770	880	2630	7990	15	355	365	41654
:40:57	50	2890	810	810	840	2600	7950	15	360	360	49964
:42:03	40	2920	750	740	780	2560	7750	1	370	370	58084
:47:32	40	3020	870	810	850	2650	8200	14	363	363	66647
Tare		Asp Tare									

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
17	316.15	08:48:25 10/05/98	F	2

[illegible]

CENTRAL MASS. ASPHALT CO.
OLD COLESBROOK RD.
BARRE, MASS.
01005
508-335-2352

Customer
LORUSSO CORP.
3 BRICHER ST.
PLAINVILLE, MASS
02762

Job
BAY STATE HOMES
CRAWFORD RD.
OAKHAM

Cust# 1
Job# 3089
Truck# LC 752
Mix# 30
Name STATE BINDER 10% RAP
Operator
Ticket# 9397

Time	Agg T	AGG 4	AGG 5	AGG 3	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		2780	800	740	800	2520			352		8000
9:01:52	0	2860	810	820	850	2570	7910	12	353	353	8263
9:05:35	0	2800	810	760	830	2500	7700	15	352	352	16315
9:07:12	30	2880	790	740	790	2540	7740	17	350	350	24405
9:08:18	40	2860	820	800	830	2550	7870	15	352	352	32627
9:09:24	0	2840	760	760	730	2460	7550	16	353	353	40530
9:10:29	20	2860	800	760	810	2530	7760	15	354	354	48644

Agg Tare Asp Tare

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
14	372.54	09:11:23 10/05/98	F	2

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

Cust#: 1
Job#: 3089
Truck#: LC 752
Mix#: 30
Name: STATE BINDER 10% RAP
Operator:
Ticket#: 9398

Owner:
RUSSO CORP.
BELCHER ST.
AINVILLE, MASS.
762

Job:
BAY STATE HOMES
CRAWFORD RD.
OAKHAM

Time	Agg T	AGG 4	AGG 5	AGG 3	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		2700	800	740	800	2520			352		8000
:12:46	-10	2940	600	750	810	2520	7820	10	356	356	8176
:13:35	20	2880	830	750	830	2540	7830	16	347	347	16353
:14:41	20	2700	790	750	830	2490	7560	15	349	349	24262
:15:47	30	2700	830	750	830	2480	7590	15	354	354	32206
:16:53	20	2860	780	700	840	2540	7720	15	351	351	40277
:17:59	40	2860	800	790	830	2490	7770	16	351	351	48398
Tare		Asp Tare									

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
15	396.74	09:18:52 10/05/98	F	2

Truck # 11

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

Customer
LORUSSO CORP.
3 BELCHER ST.
PLAINVILLE, MASS.
02762

Job
COMM OF MASS.
RTE 9
LEICESTER

Cust# 1
Job# 2959
Truck# YOU
Mix# 16
Name STATE DENSE TOP
Operator
Ticket# 9399

Time	Agg T	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		2524	4900			576		8000
9:19:45	-10	2520	4950	7470	13	579	579	8049
9:20:16	40	2560	4950	7510	13	581	581	16140
9:21:45	30	2570	4950	7520	13	575	575	24235
9:22:51	20	2560	4890	7450	11	580	580	32265
9:23:57	10	2460	4870	7330	12	577	577	40172
9:25:03	30	2510	4890	7400	11	578	578	48150

Agg Tare Asp Tare

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
1	24.00	09:25:57 10/05/98	F	2

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2352

:tomer
RUSSO CORP.
BELCHER ST.
AINVILLE, MASS.
762

Job
BAY STATE HOMES
CRAWFORD RD.
OAKHAM

Cust# 1
Job# 3089
Truck# LC 757
Mix# 30
Name STATE BINDER 10% RAP
Operator
Ticket# 9400

Time	Agg T	AGG 4	AGG 5	AGG 3	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		2780	800	748	800	2520			352		8000
:26:46	-10	2830	780	760	780	2600	7750	15	349	349	8039
:27:32	10	2840	790	760	820	2590	7800	15	345	345	16244
:29:00	20	2860	780	740	800	2480	7660	15	352	352	24256
:30:06	10	2870	790	720	750	2450	7580	16	356	356	32192
:31:11	30	2886	780	730	750	2490	7630	15	350	350	40172
:32:18	0	2820	780	760	810	2520	7690	15	351	351	48213
Tare		Asp Tare									

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
16	420.85	09:33:11 10/05/98	F	2

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

Customer
LORUSSO CORP.
3 BELCHER ST.
PLAINVILLE, MASS.
02762

Job
BAY STATE HOMES
CRAWFORD RD.
OAKHAM

Cust# 1
Job# 3089
Truck# WAD
Mix# 30
Name STATE BINDER 10% RAP
Operator
Ticket# 9401

Time	Agg T	AGG 4	AGG 5	AGG 3	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		2700	800	740	800	2520			352		8000
9:33:36	0	2790	840	730	830	2520	7710	16	351	351	8061
9:34:30	-10	2720	800	760	850	2470	7600	15	349	349	16010
9:35:42	20	2890	840	790	790	2580	7890	15	356	356	24256
9:36:49	10	2820	840	780	820	2490	7750	15	347	347	32353
9:37:55	30	2820	760	690	800	2500	7570	15	357	357	40280
9:39:01	20	2830	810	730	850	2510	7730	15	348	348	48358

Agg Tare Asp Tare

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
17	445.03	09:39:54 10/05/98	F	2

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

Lower
SH SALE
ST. ON FILE

Job
DRIVEWAY MIX

Cust# 9999
Job# 9999
Truck# 3
Mix# 8
Name BINDER MIX
Operator
Ticket# 9402

Time	Agg T	AGG 4	AGG 3	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		2812	1140	1140	2508			400		8000
:40:30	10	2850	1170	1200	2530	7750	13	401	401	8151
Tare		Asp Tare								

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
1	4.08	09:41:00 10/05/98	F	2

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01095
508-355-2952

Customer
LORUSSO CORP.
2 BELCHER ST.
PLAINVILLE, MASS.
02762

Job
BAY STATE HOMES
CRAWFORD RD.
OAKHAM

Cust# 1
Job# 3089
Truck# 5 G
Mix# 30
Name STATE BINDER 10% RAP
Operator
Ticket# 9403

Time	Agg T	AGG 4	AGG 5	AGG 3	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		2780	800	740	800	2520			352		8000
9:42:48	0	2790	820	770	810	2540	7730	8	353	353	8083
9:43:34	20	2810	780	710	780	2490	7570	14	351	351	16004
9:45:48	30	2840	800	720	880	2510	7750	15	350	350	24104
9:46:55	20	2880	780	780	850	2570	7860	15	355	355	32319
9:48:01	10	2730	820	760	800	2510	7620	15	351	351	40290
9:49:07	20	2930	790	770	800	2530	7820	17	353	353	48463

Agg Tare Asp Tare

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
18	469.26	09:50:00 10/05/98	F	2

Truck # 16

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

Lower
ROSSO CORP.
BELCHER ST.
JUNVILLE, MASS.
762

Job
BAY STATE HOMES
CRAWFORD RD.
OAKHAM

Cust# 1
Job# 3089
Truck# LC 542
Mix# 30
Name STATE BINDER 10% RAP
Operator
Ticket# 9404

Time	Agg T	AGG 4	AGG 5	AGG 3	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		2867	825	771	825	2599			363		8250
50:26	20	2910	790	810	840	2620	7970	15	363	363	8333
51:20	50	2930	790	700	800	2570	7790	14	359	359	16482
52:43	30	2960	810	760	850	2610	7990	15	365	365	24837
53:49	40	2870	810	790	830	2620	7920	16	366	366	33123
54:56	40	2930	890	810	830	2550	8010	15	363	363	41496
56:02	40	2830	870	750	820	2610	7880	16	361	361	49737
57:08	30	2990	870	790	810	2620	8080	16	361	361	58178
58:14	20	2880	760	730	800	2550	7720	15	367	367	66265
Tare		Asp Tare									

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
19	502.39	09:59:07 10/05/98	F	2

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

Customer
LORUSSO CORP.
3 BELCHER ST.
PLAINVILLE, MASS.
02762

Job
BAY STATE HOMES
CRAWFORD RD.
OAKHAM

Cust# 1
Job# 3089
Truck# LC 543
Mix# 30
Name STATE BINDER 10% RAP
Operator
Ticket# 9405

Time	Agg T	AGG 4	AGG 5	AGG 3	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		2780	800	748	800	2520			352		8000
9:59:57	0	2830	810	740	820	2530	7730	12	351	351	8081
10:00:44	30	2840	860	770	810	2560	7840	15	350	350	16271
10:02:04	20	2810	820	740	820	2530	7720	16	351	351	24342
10:03:10	30	2780	800	800	810	2500	7690	15	354	354	32386
10:04:17	20	2750	830	740	810	2530	7660	16	351	351	40397
10:05:22	40	2700	810	690	780	2450	7430	16	350	350	48177
10:06:29	0	2700	780	750	840	2520	7590	15	353	353	56120
10:07:35	30	2940	780	710	840	2590	7860	16	352	352	64332

Agg Tare Asp Tare

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
20	534.56	10:08:28 10/05/98	F	2

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

tomer
RUSSO CORP.
BELCHER ST.
AINVILLE, MASS.
762

Job
BAY STATE HOMES
CRAWFORD RD.
OAKHAM

Cust# 1
Job# 3089
Truck# LC 751
Mix# 30
Name STATE BINDER 10% RAP
Operator
Ticket# 9406

Time	Agg T	AGG 4	AGG 5	AGG 3	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		2780	800	748	800	2520			352		8000
:08:54	10	2830	820	800	830	2530	7810	16	359	359	8169
:09:47	40	2790	790	760	820	2470	7630	16	348	348	16147
:11:25	10	2900	790	710	730	2510	7640	17	356	356	24143
:12:49	10	2820	770	730	810	2520	7650	16	351	351	32144
:13:55	30	2820	820	790	810	2510	7750	16	351	351	40245
:15:01	40	2780	830	750	820	2560	7740	16	349	349	48334
Tare		Asp Tare									

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
21	558.73	10:15:54 10/05/98	F	2

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

Customer
LORUSSO CORP.
3 BELCHER ST.
PLAINVILLE, MASS.
02762

Job
BAY STATE HOMES
CRAWFORD RD.
OAKHAM

Cust# 1
Job# 3083
Truck# BLK
Mix# 30
Name STATE BINDER 10% RAP
Operator
Ticket# 9408

Time	Agg T	AGG 4	AGG 5	AGG 3	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		2780	800	748	800	2520			352		8000
10:23:44	0	2830	780	760	820	2580	7770	13	350	350	8120
10:24:28	10	2830	820	730	830	2580	7790	17	347	347	16257
10:25:55	0	2800	780	720	740	2480	7520	16	352	352	24129
10:27:01	30	2790	790	730	790	2470	7570	16	354	354	32053
10:28:07	20	2780	800	770	810	2460	7620	16	352	352	40025
10:29:13	40	2770	800	750	790	2490	7600	16	350	350	47975

Agg Tare Asp Tare

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
23	607.07	10:30:07 10/05/98	F	2

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

Lower
RUSSO CORP.
BELCHER ST.
CINVILLE, MASS.
762

Job
BAY STATE HOMES
CRAWFORD RD.
OAKHAM

Cust# 1
Job# 3089
Truck# LC 757
Mix# 30
Name STATE BINDER 10% RAP
Operator
Ticket# 9409

Time	Agg T	AGG 4	AGG 5	AGG 3	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		2780	800	748	800	2520			352		8000
30:25	10	2780	780	740	830	2600	7730	17	355	355	8085
31:26	20	2800	750	770	820	2580	7760	17	350	350	16195
32:51	30	2750	820	720	760	2480	7570	17	351	351	24116
33:57	10	2900	780	756	790	2500	7720	17	357	357	32193
35:04	0	2810	810	760	810	2590	7780	17	351	351	40324
36:09	30	2850	820	770	810	2570	7820	17	352	352	48496
Tare		Asp Tare									

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
24	631.32	10:37:03 10/05/98	F	2

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

Customer
LORUSSO CORP.
3 BELCHER ST.
PLAINVILLE, MASS.
02762

Job
BAY STATE HOMES
CRAWFORD RD.
OAKHAM

Cust# 1
Job# 3089
Truck# WAD
Mix# 30
Name STATE BINDER 10% RAP
Operator
Ticket# 9412

Time	Agg T	AGG 4	AGG 5	AGG 3	AGG 2	AGG 1	Agg Total	Asp T	ASP 6	Asp Total	Batch Total
Target		2700	800	740	800	2520			352		8000
10:44:02	10	2790	820	750	810	2450	7630	14	350	350	7980
10:45:06	0	2820	800	770	800	2510	7700	14	351	351	16031
10:46:12	30	2820	770	720	790	2450	7550	15	352	352	23933
10:47:19	40	2760	780	730	850	2530	7650	15	349	349	31932
10:48:25	10	2790	760	740	1020	2530	7840	15	355	355	40127
10:49:31	10	2780	750	790	910	2570	7800	16	355	355	48282

Agg Tare Asp Tare

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
25	655.46	10:50:24 10/05/98	F	2

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

Lower
RUSSO CORP.
BELCHER ST.
AINVILLE, MASS.
762

Job
BAY STATE HOMES
CRAWFORD RD.
OAKHAM

Cust# 1
Job# 3089
Truck# 5 G
Mix# 30
Name STATE BINDER 10% RAP
Operator
Ticket# 9413

Time	Agg T	AGG 4	AGG 5	AGG 3	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		2780	800	748	800	2520			352		8000
:54:55	0	2770	790	740	810	2490	7600	9	356	356	7956
:55:42	40	2780	810	730	730	2650	7700	17	348	348	16004
:56:49	10	2790	840	760	780	2520	7690	17	348	348	24042
:57:55	40	2830	830	770	990	2540	7960	6	356	356	32358
:00:59	50	2740	830	740	830	2780	7920	16	352	352	40630
:04:44	70	2950	790	740	750	2530	7760	18	351	351	48741
Tare		Asp Tare									

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
20	679.83	11:05:36 10/05/98	F	2

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

Customer
LORUSSO CORP.
3 BELCHER ST.
PLAINVILLE, MASS.
02762

Job
DAY STATE HOMES
CRAWFORD RD.
OAKHAM

Cust# 1
Job# 3089
Truck# LC 542
Mix# 30
Name STATE BINDER 10% RAP
Operator
Ticket# 9414

Time	Agg T	AGG 4	AGG 5	AGG 3	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		2867	825	771	825	2599			363		8250
11:07:35	40	2940	850	700	790	2650	7930	10	364	364	8294
11:08:24	60	2920	830	790	880	2540	7960	16	361	361	16615
11:09:31	50	2850	830	760	840	2570	7850	16	368	368	24833
11:10:36	60	2910	810	790	850	2670	8030	15	357	357	33220
11:11:43	60	2900	760	800	860	2550	7870	15	363	363	41453
11:12:49	60	2880	820	780	830	2630	7940	15	363	363	49756
11:14:14	30	2840	890	700	760	2540	7730	16	364	364	57850
11:15:18	70	3070	860	810	840	2570	8150	16	365	365	66365

Agg Tare Asp Tare

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
27	713.01	11:16:11 10/05/98	F	2

TR. 62 24

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

stomer
DRUSSO CORP.
BELCHER ST.
LAINVILLE, MASS.
2762

Job
BAY STATE HOMES
CRAWFORD RD.
OAKHAM

Cust# 1
Job# 3089
Truck# LC 543
Mix# 30
Name STATE BINDER 10% RAP
Operator
Ticket# 9415

Time	Agg T	AGG 4	AGG 5	AGG 3	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		2780	800	748	800	2520			352		8000
1:18:23	50	2880	790	700	830	2530	7730	9	352	352	8082
1:19:11	50	2790	850	790	850	2550	7830	15	348	348	16260
1:20:17	30	2840	800	760	830	2550	7780	15	351	351	24391
1:21:23	50	2770	810	770	830	2480	7660	14	350	350	32401
1:22:29	40	2800	770	750	800	2490	7610	14	352	352	40363
1:23:35	50	2820	800	800	860	2570	7850	15	351	351	48564
1:24:42	30	2730	770	700	770	2450	7420	15	358	358	56342
1:25:47	60	2750	810	720	830	2510	7620	15	350	350	64312

g Tare Asp Tare

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
28	745.17	11:26:41 10/05/98	F	2

TRUCK # 25

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

Customer
LORUSSO CORP.
3 BELCHER ST.
PLAINVILLE, MASS.
02762

Job
BAY STATE HOMES
CRAWFORD RD.
OAKHAM

Cust# 1
Job# 3069
Truck# LC 751
Mix# 30
Name STATE BINDER 10% RAP
Operator
Ticket# 9416

Time	Agg T	AGG 4	AGG 5	AGG 3	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		2700	800	740	800	2520			352		8000
11:27:03	30	2940	800	740	850	2550	7880	15	354	354	8234
11:28:00	40	2870	800	790	810	2510	7780	15	352	352	16366
11:29:35	40	2870	820	750	820	2550	7810	15	353	353	24529
11:30:40	50	2820	790	750	820	2530	7710	14	349	349	32588
11:31:46	50	2760	800	710	850	2460	7580	15	351	351	40519
11:32:52	40	2780	790	790	850	2530	7740	14	354	354	48613

Agg Tare Asp Tare

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
29	769.48	11:33:46 10/05/98	F	2

26

Truck = 26

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

:omer
RUSSO CORP.
ELCHER ST.
INVILLE, MASS.
'G2

Job
BAY STATE HOMES
CRAWFORD RD.
OAKHAM

Cust# 1
Job# 2089
Truck# LC 752
Mix# 30
Name STATE BINDER 10% RAP
Operator
Ticket# 9417

Time	Agg T	AGG 4	AGG 5	AGG 3	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
'arget		2780	800	748	800	2520			352		8000
34:15	20	2750	790	740	800	2520	7600	16	355	355	7955
:35:04	60	2820	820	740	820	2550	7750	14	353	353	16058
:36:23	40	2770	760	740	830	2540	7640	15	349	349	24047
:37:29	50	2780	730	790	770	2460	7530	15	356	356	31933
:38:35	40	2830	780	720	800	2550	7680	14	353	353	39586
:39:41	20	2920	810	720	850	2510	7810	15	349	349	48125
Tare		Asp Tare									

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
30	793.54	11:40:35 10/05/98	F	2

Truck # 21

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

Customer
LORUSSO CORP.
3 BELCHER ST.
PLAINVILLE, MASS.
02762

Job
BAY STATE HOMES
CRAWFORD RD.
OAKHAM

Cust# 1
Job# 3085
Truck# LC 757
Mix# 30
Name STATE BINDER 10% RAP
Operator
Ticket# 9418

Time	Agg T	AGG 4	AGG 5	AGG 3	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		2780	800	748	800	2520			352		8000
11:41:06	30	2840	820	770	840	2500	7770	14	352	352	8122
11:41:54	40	2850	810	740	830	2510	7740	14	350	350	16212
11:43:11	50	2880	760	730	800	2540	7710	15	352	352	24274
11:44:18	20	2750	820	800	830	2530	7730	15	354	354	32358
11:45:24	50	2810	810	780	720	2510	7550	15	351	351	40259
11:46:29	40	2930	760	720	780	2520	7710	15	350	350	48319

Agg Tare Asp Tare

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
31	817.70	11:47:23 10/05/98	F	2

Truck # 2-8

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

tower
ARGE SALE
CT.ON FILE

Job
MUNICIPAL PAVING

Cust# 8888
Job# 8888
Truck# 4
Mix# G2
Name SIDE WALK
Operator
Ticket# 9420

Time	Agg T	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		2000	4250			417		6667
:55:19	30	2010	4320	6330	13	411	411	6741
:55:56	70	2010	4230	6240	11	420	420	13401
:57:06	70	2020	4310	6330	10	418	418	20145
Tare		Asp Tare						

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
1	10.07	11:58:01 10/05/98	F	2

Page # 29

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2552

Customer
LORUSSO CORP.
3 BELCHER ST.
PLAINVILLE, MASS.
02762

Job
BAY STATE HOMES
CRAWFORD RD.
OAKHAM

Cust# 1
Job# 3089
Truck# WAD
Mix# 30
Name STATE BINDER 10% RAP
Operator
Ticket# 9421

Time	Agg T	AGG 4	AGG 5	AGG 3	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		2780	800	748	800	2520			352		8000
11:58:23	40	2860	810	750	740	2460	7620	13	355	355	7975
11:59:21	70	2920	850	730	790	2470	7760	12	350	350	16085
12:00:28	40	2830	850	830	790	2550	7850	11	347	347	24282
12:01:34	40	2840	810	750	820	2540	7760	12	351	351	32393
12:02:39	70	2780	790	720	840	2500	7630	11	349	349	40372
12:03:45	50	2960	810	760	830	2540	7900	11	354	354	48626

Agg Tare Asp Tare

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
32	842.01	12:04:39 10/05/98	F	2

30

Truck # 30

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

Maker
ROSSO CORP.
BELCHER ST.
AINVILLE, MASS.
762

Job
BAY STATE HOMES
CRAWFORD RD.
OAKHAM

Cust# 1
Job# 3089
Truck# 5 G
Mix# 30
Name STATE BINDER 10% RAP
Operator
Ticket# 9422

Time	Agg T	AGG 4	AGG 5	AGG 3	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		2780	800	740	800	2520			352		8000
:05:06	30	2810	770	790	810	2550	7730	13	354	354	8084
:05:58	30	2860	780	690	800	2470	7600	10	352	352	16036
:07:35	20	2840	810	740	860	2590	7840	10	349	349	24225
:08:41	40	2800	810	760	840	2500	7710	10	352	352	32287
:09:47	40	2810	800	760	810	2510	7690	11	351	351	40328
:10:53	40	2890	800	760	800	2590	7840	12	353	353	48521
Tare		Asp Tare									

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
33	866.27	12:11:46 10/05/98	F	2

Ticket # 31

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

Customer
LORUSSO CORP.
3 BELCHER ST.
PLAINVILLE, MASS.
02762

Job
BAY STATE HOMES
CRAWFORD RD.
OAKHAM

Cust# 1
Job# 3089
Truck# LC 542
Mix# 30
Name STATE BINDER 10% RAP
Operator
Ticket# 9423

Time	Agg T	AGG 4	AGG 5	AGG 3	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		2867	825	771	825	2599			363		8250
12:12:11	30	2810	840	810	850	2580	7890	12	363	363	8253
12:13:05	20	2820	790	720	760	2530	7620	11	365	365	16238
12:14:26	50	2890	840	780	890	2530	7930	11	361	361	24529
12:15:33	40	2850	820	770	860	2580	7880	11	362	362	32771
12:16:39	60	2820	800	820	870	2640	7950	11	362	362	41083
12:17:45	20	2900	840	720	860	2690	8010	12	366	366	49459
12:18:52	30	2920	790	800	840	2560	7910	13	362	362	57731
12:19:58	20	2870	790	730	750	2580	7720	12	363	363	65814

Agg Tare Asp Tare

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
34	899.18	12:20:51 10/05/98	F	2

32

Truck # 32

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

owner	Job	Cust# 1
USSO CORP.	BAY STATE HOMES	Job# 3089
ELCHER ST.	CRAWFORD RD.	Truck# LC 543
INVILLE, MASS.	OAKHAM	Mix# 30
62		Name STATE BINDER 10% RAP
		Operator
		Ticket# 9424

Time	Agg T	AGG 4	AGG 5	AGG 3	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
arget		2780	800	748	800	2520			352		8000
21:25	20	2780	780	720	890	2630	7800	13	352	352	8152
22:22	40	2910	810	750	850	2520	7840	14	353	353	16345
23:41	30	2820	830	780	850	2450	7730	13	355	355	24430
24:47	10	2880	810	750	810	2540	7790	14	352	352	32572
25:53	50	2930	790	760	830	2520	7830	14	352	352	40754
26:59	-10	2800	830	690	800	2500	7620	15	354	354	48728
28:05	20	2800	810	760	790	2450	7610	15	348	348	56686
29:11	50	2750	790	760	850	2540	7690	15	348	348	64724
Tare		Asp Tare									

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
35	931.54	12:30:05 10/05/98	F	2

Truck # 34

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

Customer
LORUSSO CORP.
3 BELCHER ST.
PLAINVILLE, MASS.
02762

Job
BAY STATE HOMES
CRAWFORD RD.
OAKHAM

Cust# 1
Job# 3089
Truck# LC 751
Mix# 30
Name STATE BINDER 10% RAP
Operator
Ticket# 9425

Time	Agg T	AGG 4	AGG 5	AGG 3	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		2780	800	740	800	2520			352		8000
12:30:30	20	2900	800	780	800	2550	7830	14	355	355	8185
12:31:24	50	2840	830	750	840	2510	7770	15	354	354	16309
12:32:47	20	2830	800	770	840	2520	7760	14	351	351	24420
12:33:53	50	2740	780	670	830	2470	7490	15	348	348	32258
12:34:59	30	2700	790	710	810	2520	7530	15	351	351	40139
12:36:05	40	2930	800	780	840	2580	7930	16	354	354	48423

Agg Tare Asp Tare

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
36	955.75	12:36:59 10/05/98	F	2

TRUCK [illegible]

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

tomer
SH SALE
ST. ON FILE

Job
DRIVEWAY MIX

Cust# 9999
Job# 9999
Truck# 2
Mix# 67
Name SIDE WALK
Operator
Ticket# 9426

Time	Agg T	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		2250	4781			469		7500
:39:48	10	2270	4830	7100	10	471	471	7571
:40:19	50	2270	4770	7040	13	473	473	15084
:41:28	40	2190	4750	6940	12	472	472	22496
:42:34	40	2250	4770	7020	12	469	469	29985
Tare		Asp Tare						

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
1	14.99	12:43:29 10/05/98	F	2

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

Customer
CORUSSO CORP.
3 BELCHER ST.
PLAINVILLE, MASS.
02762

Job
BAY STATE HOMES
CRAWFORD RD.
OAKHAM

Cost# 1
Job# 3089
Truck# LC 757
Mix# 30
Name STATE BINDER 10% RAP
Operator
Ticket# 9427

Time	Agg T	AGG 4	AGG 5	AGG 3	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		2780	800	748	800	2520			352		8000
12:43:59	40	2880	800	810	830	2540	7860	16	350	350	8210
12:44:48	50	2850	820	730	800	2530	7730	13	349	349	16289
12:46:04	50	2800	760	770	830	2520	7680	14	351	351	24320
12:47:11	30	2830	790	720	810	2460	7610	14	351	351	32281
12:48:16	20	2790	800	720	830	2530	7670	14	349	349	40300
12:49:22	50	2890	790	740	850	2520	7790	14	355	355	48445

Agg Tare Asp Tare

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
37	979.97	12:50:16 10/05/98	F	2

Test - 56

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

owner
USSO CORP.
ELCHER ST.
INVILLE, MASS.
62

Job
RAY STATE HOKES
CRANFORD RD.
OAKHAM

Cust# 1
Job# 3089
Truck# WAD
Mix# 30
Name STATE BINDER 10% RAP
Operator
Ticket# 9428

Time	Agg T	AGG 4	AGG 5	AGG 3	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
arget		2780	600	748	800	2520			352		8000
50:45	30	2640	920	780	830	2540	7910	16	353	353	8263
52:23	20	2790	940	760	870	2440	7800	14	351	351	16414
53:29	40	2820	830	730	770	2510	7660	13	353	353	24427
54:35	40	3070	780	770	800	2560	7980	14	353	353	32760
55:41	40	2710	830	750	810	2520	7620	14	347	347	40727
56:47	40	2760	870	770	790	2580	7770	15	357	357	48854
Tare		Asp Tare									

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
38	1004.40	12:57:40 10/05/98	F	2

Truck # 37

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

Customer
CASH SALE
CUST. ON FILE

Job
DRIVEWAY MIX

Cust# 9999
Job# 9999
Truck# 3
Mix# 2
Name 1/2 BINDER
Operator
Ticket# 9429

Time	Agg T	AGG 3	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		2540	2700	2400			360		8000
1:52:03	0	2550	2700	2390	7640	11	361	361	8001
1:52:38	60	2540	2690	2400	7630	16	358	358	15989
1:53:44	20	2530	2730	2420	7680	16	363	363	24032
1:54:50	50	2510	2640	2350	7500	15	362	362	31894
1:55:56	50	2550	2730	2420	7700	14	364	364	39958

Agg Tare Asp Tare

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
1	19.98	13:56:50 10/05/98	F	2

Asphalt Plant D
Barre MA
RUN #1

Date: 10-5-98
Josh Berkowitz, Derek Hawkes
Frank Phoenix

START	STOP	JOB #	TRUCK	MIX TYPE	TICKET NUM.	MIX TEMP	STACK TEMP	ASPHALT TEMP	BATCH TOTAL
						DEG F (10)	DEG F (11)	DEG F	(lbs)
6:24	6:25	9999	2	15	9381				15898
6:29	6:35	3089	LC757	30	9382				49054
6:36	6:41	9999	2	16	9383				48291
6:48	6:54	3089	WAO	30	9384				47676
6:55	7:00	3089	56	30	9385				48178
7:03	7:08	3058	56-22	18	9386				48166
7:09	7:18	3089	LC542	30	9387				66658
8:56	9:03	3089	LC543	30	9396				64143
10:16	10:22	3089	LC751	30	9407				48705
10:37	10:38	9999	3	33	9410				12485
10:41	10:43	8888	4	33	9411				17904
11:48	11:54	2959	BLK	16	9419				48233

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

Customer
CASH SALE
CUST. ON FILE

Job
DRIVEWAY MIX

Cust# 9999
Job# 9999
Truck# 2
Mix# 15
Name STATE TOP (TYPE I)
Operator
Ticket# 9361

Time	Agg T	AGG 3	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		1488	2680	3344			488		8000
6:24:24	0	1460	2640	3390	7490	0	491	491	7981
6:24:59	40	1470	2650	3310	7430	10	487	487	15898

Agg Tare Asp Tare

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
1	7.95	06:26:01 10/05/98	F	2

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
PAXTON, MASS.
01608
508-755-2952

Owner
RUSSO CORP.
BELCHER ST.
AINVILLE, MASS.
762

Job
BAY STATE HOMES
CRAWFORD RD.
OAKHAM

Cust# 1
Job# 3083
Truck# LC 757
Mix# 30
Name STATE BINDER 10% RAP
Operator
Ticket# 9382

Time	Agg T	AGG 4	AGG 5	AGG 3	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		2780	800	740	880	2520			352		8060
:29:22	-10	2840	990	790	840	2510	7970	9	358	358	8328
:30:28	20	2800	1200	750	820	2590	8160	15	357	352	16840
:31:34	30	2790	930	700	820	2470	7710	14	349	348	24898
:32:41	40	2770	750	750	820	2490	7580	14	355	355	32833
:33:47	10	2810	740	760	850	2520	7680	12	351	351	40864
:34:53	40	2860	780	750	850	2600	7840	12	350	350	49054
Tare		Asp Tare									

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
1	24.53	06:35:46 10/05/98	F	2

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2351

Customer
CASH SALE
CUST. ON FILE

Job
DRIVEWAY MIX

Cust# 9999
Job# 9999
Truck# 2
Mix# 16
Name STATE DENSE TOP
Operator
Ticket# 9383

Time	Agg T	AGG 2	AGG 1	Agg Total	Asp T	ASP 1	Asp Total	Batch Total
Target		2524	4900			576		5000
6:36:28	0	2530	4940	7470	9	565	565	6035
6:37:05	30	2550	4900	7450	6	596	596	10071
6:38:12	30	2470	4950	7420	5	582	582	24073
6:39:18	20	2510	4950	7460	5	574	574	32107
6:40:24	20	2540	4910	7450	5	577	577	40134
6:41:31	10	2540	5040	7580	4	577	577	45291

Agg Tare Asp Tare

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
1	24.15	06:42:24 10/05/90	F	2

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508 355-2952

Lower
RUSSO CORP.
BELCHER ST.
ATKVILLE, MASS.
152

Job
DAY STATE HOMES
CRAWFORD RD.
OAKHAM

Cust# 1
Job# 3049
Truck# WAP
Mix# 30
Name STATE BINDER 10% RAP
Operator
Ticket# 5334

Time	Agg T	AGG 4	AGG 5	AGG 3	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		2760	800	748	800	2520			352		8000
:49:31	6	2780	780	770	820	2470	7620	2	352	352	7972
:49:16	20	2740	840	770	790	2430	7620	12	348	348	15940
:50:22	20	2760	800	770	790	2480	7600	12	348	348	23888
:51:29	30	2790	760	710	780	2480	7520	12	351	351	31759
:52:35	10	2790	800	740	730	2540	7600	13	357	357	39716
:53:41	10	2740	810	760	810	2490	7610	12	350	350	47676
Tare		Asp Tare									

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	% Total	Time & Date	Pub/Pel	Location
2	48.37	06:54:34 10/05/93	P	7

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

Customer
LORUSSO CORP.
3 BELCHER ST.
PLAINVILLE, MASS.
02762

Job
BAY STATE HOMES
CRANFORD RD.
OAKMAN

Cust# 1
Job# 3039
Truck# S G
Mix# 30
Name STATE FINDER 10% RAP
Operator
Ticket# 3385

Time	Agg T	AGG 4	AGG 5	AGG 3	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		2780	800	740	800	2520			350		8000
6:54:55	10	2800	800	770	810	2550	7730	13	351	351	8001
6:55:53	30	2810	800	760	860	2490	7720	12	350	350	16151
6:57:02	20	2840	780	780	860	2540	7800	13	350	350	24301
6:58:09	20	2740	810	730	810	2560	7650	13	352	352	32303
6:59:15	20	2720	780	710	820	2440	7470	13	354	354	40127
7:00:21	0	2770	840	730	830	2530	7700	13	351	351	48178

Agg Tare Asp Tare

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
3	72.40	07:01:14 10/05/93	F	2

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

Dest:
SO SALE
ST ON FILE

Job
TOWN OF ORANGE
HOLDSHIRE RD

Cust# 9229
Job# 3958
Truck# 90 72
Mix# 18
Name STATE BINDER
Operator
Ticket# 9365

Time	Agg T	AGG 4	AGG 3	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		2800	900	900	3000			400		8600
:02:52	-10	2850	930	890	3030	7700	6	407	407	8107
:03:33	30	2860	880	920	3010	7670	12	405	405	16187
:04:39	40	2780	920	930	3010	7640	12	401	401	24223
:05:45	40	2780	900	830	2940	7450	11	398	398	32071
:06:51	20	2770	880	860	3010	7520	12	399	399	39990
:07:58	40	2920	900	910	3050	7780	11	396	396	48166

Tare Asp Tare

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
1	24.08	07:08:52 10/05/98	F	1

CENTRAL MASS. ASPHALT CO
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2252

Customer
LORUSSO CORP.
2 BELCHER ST.
PLAINVILLE, MASS
02762

Job
BAY STATE HOMES
CRAWFORD RD.
OAKHAM

Cust# 1
Job# 3059
Truck# LC 542
Mix# 30
Name STATE BIRDER 10% RAP
Operator
Ticket# 9387

Time	Agg T	AGG 4	AGG 5	AGG 3	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		2967	825	771	825	2599			363		8250
7:09:23	10	2950	830	810	890	2590	8070	12	362	362	8432
7:10:10	30	2940	820	780	840	2600	7980	11	359	359	16771
7:12:14	30	2960	850	790	840	2580	8020	12	365	365	25156
7:13:20	0	2850	800	700	820	2550	7720	12	364	364	33240
7:14:26	10	2890	810	790	830	2600	7920	14	363	363	41523
7:15:32	30	2930	840	790	880	2640	8080	12	359	359	49962
7:16:38	20	2900	850	780	870	2620	8020	13	365	365	58347
7:17:44	20	2920	820	750	830	2630	7950	13	361	351	66658

Agg Tare Asp Tare

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Feb/Del	Location
1	105.79	07:18:37 10/05/98	F	2

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

tomer
RUSSO CORP.
BELCHER ST.
AINVILLE, MASS.
762

Job
BAY STATE HOMES
CRAWFORD RD.
OAKHAM

Cust# 1
Job# 2039
Truck# LC 593
Mix# 30
Name STATE BINDER 1M% RAP
Operator
Ticket# 3336

Time	Agg T	AGG 4	AGG 5	AGG 3	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	batch Total
Target		2780	800	748	800	2520			352		8000
:55:44	0	2800	800	680	780	2500	7550	8	354	354	7914
:56:28	10	2630	810	730	830	2530	7730	15	350	350	15994
:57:35	20	2810	810	750	830	2530	7730	15	352	352	24076
:58:41	10	2610	790	760	840	2520	7740	15	352	352	32168
:59:47	10	2770	790	750	790	2520	7620	16	350	350	40138
:00:54	40	2770	830	720	840	2480	7640	16	352	352	48130
:02:00	10	2700	750	710	780	2560	7500	15	352	352	55982
:03:06	30	2920	810	730	830	2520	7810	16	351	351	64143

Tare Asp Tare

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
13	348.22	09:04:06 10/05/98	F	2

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

Customer
LORUSSO CORP.
3 BELCHER ST.
PLAINVILLE, MASS.
02762

Job
BAY STATE HOMES
CRAWFORD RD.
OAKHAM

Cust# 1
Job# 3089
Truck# LC 751
Mix# 30
Name STATE BINDER 10% RAP
Operator
Ticket# 6407

Time	Agg T	AGG 4	AGG 5	AGG 3	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		2700	800	748	800	2520			352		8000
10:16:19	10	2960	790	760	840	2500	7850	17	356	356	8206
10:17:14	20	2800	820	760	820	2550	7750	16	350	350	16306
10:18:50	20	2850	820	710	720	2550	7650	17	351	351	24307
10:19:56	30	2800	800	760	830	2500	7690	17	349	349	32346
10:21:03	40	2880	780	770	780	2520	7730	18	355	355	40431
10:22:09	10	3010	810	740	820	2540	7920	18	354	354	48705

Agg Tare Asp Tare

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
22	583.08	10:23:02 10/05/98	F	2

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2553

Lower
SH SALE
ST. ON FILE

Job
DRIVEWAY MIX

Cust# 9999
Job# 9999
Truck# 3
Mix# 23
Name 3/8 TOP
Operator
Ticket# 9410

Time	Agg T	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		2778	2835			387		6000
37:35	10	2820	2850	5670	15	389	389	6059
38:20	40	2810	2930	5740	14	386	386	12185
Tare		Asp Tare						

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
1	6.09	10:39:36 10/05/98	F	2

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

Customer	Job	
CHARGE SALE	MUNICIPAL PAVING	Cust# 8888
ACCT.ON FILE		Job# 8588
		Truck# 4
		Mix# 33
		Name 3/8 TOP
		Operator
		Ticket# 9411

Time	Agg T	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		2778	2835			387		6000
10:41:05	-10	2750	2780	5530	9	389	389	5919
10:41:32	30	2740	2820	5560	14	387	387	11866
10:42:52	50	2800	2850	5650	12	388	388	17904

Agg Tare Asp Tare

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
1	8.95	10:43:47 10/05/98	F	2

PORT CHANGE - DO NOT TEST THE TRUCK

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

Tower
RUSSO CORP.
BELCHER ST.
AINVILLE, MASS.
762

Job
COMM OF MASS.
RTE 9
LEICESTER

Cust# 1
Job# 2959
Truck# BLK
Mix# 16
Name STATE DENSE TOP
Operator
Ticket# 9419

Time	Agg T	AGG 2	AGG 1	Agg Total	Asp T	ASF A	Asp Total	Batch Total
Target		2524	4900			576		8000
48:32	10	2560	4890	7450	9	575	575	8025
:49:06	50	2570	4960	7530	12	580	580	16135
:50:23	50	2540	4880	7420	11	578	578	24133
:51:30	60	2530	5170	7700	11	575	575	32408
:52:36	30	2470	4830	7300	10	575	575	40283
53:41	70	2510	4860	7370	11	580	580	48233
Tare		Asp Tare						

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	For/Del	Location
2	48.20	11:54:35 10/05/98	F	2

(14) TRUCK W/O EXHAUST COVER
(15) PORT CHANGE (16) PLT START UP 6:15, SHUT DOWN AT 6:20 STARTED BACKUP A 7:00
(3) TRUCKS ARE 6 DUMPS = 48,000 lbs / TRAILERS ARE 8 DUMPS = 66000 lbs (17) EXTENDED TEST START 12:09

Datasheet

ASPHALT PLANT D
BARRE, MA
RUN # 2

DATE: 10/6/98
~~Date:~~
FRANK PHOENIX

TRUCK COUNT #	— TEST TIME — START (16)	STOP	TRUCK #	MIX # / TICKET #	MIX TEMP °F (10)	STACK TEMP °F (11)	BATCH (lbs) TOTAL ~~TONS~~
1	7:14	7:20	WAD	24	387	351	48114
2	7:21	7:27	BLK	9434/~~24~~16	400	360	48233
3	7:28	7:34	SG 22	24-9435	404	321	48088
4	7:35	7:40	3	8-9436	419	306	40437
(2) → 5	7:40	7:52	LC 544	24-9437	413	286	66095
6	7:53	8:02	LC 542	24-9438	396	302	66196
7	8:02	8:09	LC 750	24-9439	399	302	48131
8	8:10	8:15	3	8-9440	402	316	40226
PORT CHANGE 9	8:16	8:26	LC 543	24-9441	404	342	63645
(5) 10	8:37	8:43	LC 752	24-9443	386	359	48094
11	8:44	8:47	4	67-9444	411	339	20014
12	9:00	9:06	LC 751	24-9446	386	348	48077
(6) → 13	9:07	9:13	LC 757	24-9447	391	370	47960
14	9:28	9:34	PER	16-9449	404	326	47996
(7) → (8) 15	9:35	9:40	3	33-9450	449	255	34130
16	9:40	9:46	WAD	24-9451	410	214	48081
17	9:48	9:54	SG 22	24-9452	411	265	47919
18	9:55	10:03	LC 541	24-9453	404	311	65,766
19	10:08	10:16	LC 542	24-9454	416	302	65,858
20	10:28	10:37	LC 543	24-9458	385	277	66,064
21	10:38	10:46	LC 36	24-9459	394	284	64,046
(12) → 22	10:47	10:53	LC 752	24-9460	390	307	47,914
23	11:04	11:11	RS	24-9461	412	297	66,173
(13) 24	11:12	11:18	LC 751	24-9462	393	297	48020
25	11:19	11:25	LC 757	24-9463	401	288	47961
(14) 26	11:27	11:35	WE 7	24-9464	391	284	66033
27	11:35	11:39	4	33-9465	392	279	30446
28	11:40	11:46	BRN	16-9466	383	283	47925
(15) 29	11:54	12:00	WAD	24-9468	389	278	48186
(17) 30	12:02	12:09	LC 541	24-9469	393	273	65967
31	12:15	12:17	3	33-9470	403	309	2169
32	12:38	12:45	LC 750	24-9471	208	127	48720
33	12:46	12:57	LC 542	24-9472	376	260	63726
34	12:58	13:07	LC 543	24-9473	400	307	64141
35	13:08	13:08	LC 36	24-9474	410	320	63838
36	13:19	13:26	LC 752	24-9475	391	303	48039
	END OF TEST						

(12) EXTENDED TEST - TRUCK LEFT IN TUNNEL BEYOND 15 SECOND HOLD TIME 10:53 - 11:02
(13) MISSED FIRST PART OF FIRST DROP

(1) NO RAP IN MIX (ALSO TRUCK W/O EXHAUST STACK) (2) WAITING ON AGG - SLOW DOWN IN TUNNEL (4) E
Barre Plant Data Sheets OFF BODY OF TRUCK (5) MISSED TRUCK - TUNNEL NOT SECURE (6) DUMPED D
GRAVEL INTO TRUCK - STOPPED SAMPLING, ~~SP~~ SHUT DOWN FAN (7) MISSED PART OF FIRST DUMP (8) TRU
(9) MISSED FIRST PART OF FIRST DROP (10) TEMP IN SHOOT THAT FEEDS HOT ELEVATOR (11) STACK TEMP AT BAGHOUSE IN

2

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

tomer	Job	Cust# 1
RUSSO CORP.	COMM OF MASS.	Job# 2959
BELCHER ST.	RTE 9	Truck# BLK
AINVILLE, MASS.	LEICESTER	Mix# 16
762		Name STATE DENSE TOP
		Operator
		Ticket# 9434

Time	Agg T	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		2524	4900			576		8000
:19:51	0	2570	4900	7470	9	579	579	8049
:20:33	20	2480	4910	7390	7	577	577	16016
:21:44	0	2540	4890	7430	5	576	576	24022
:22:51	-10	2550	4920	7470	7	577	577	32069
:23:57	20	2520	4870	7390	8	578	578	40037
:25:03	10	2550	5070	7620	6	576	576	48233
g Tare		Asp Tare						

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
1	24.12	07:25:56 10/06/98	F	2

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

Customer
LORUSSO CORP.
3 BELCHER ST.
PLAINVILLE, MASS.
02762

Job
COMM. OF MASS.
DIST. 3 / CONTRACT # 9
RTE. 12 ASHBURNHAM

Cust# 1
Job# 2948
Truck# 5G 22
Mix# 24
Name MODIFIED TOP 10% RAP
Operator
Ticket# 9435

Time	Agg T	AGG 3	AGG 5	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		2476	800	1420	2920			384		8000
7:26:52	-10	2460	780	1440	2880	7560	8	385	385	7945
7:27:39	10	2450	790	1390	2910	7540	11	381	381	15866
7:28:45	0	2460	820	1430	2880	7590	10	382	382	23838
7:29:51	-10	2490	840	1420	2910	7660	9	382	382	31880
7:30:57	10	2480	830	1420	2930	7660	10	386	386	39926
7:32:04	20	2500	800	1430	3050	7780	10	382	382	48088

Agg Tare Asp Tare

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
3	72.04	07:32:56 10/06/98	F	2

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

tomer
SH SALE
ST. ON FILE

Job
DRIVEWAY MIX

Cust# 9999
Job# 9999
Truck# 3
Mix# 8
Name BINDER MIX
Operator
Ticket# 9436

Time	Agg T	AGG 4	AGG 3	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		2812	1140	1140	2508			400		8000
:33:31	0	3120	1100	1110	2500	7830	7	401	401	8231
:34:20	20	2890	1140	1120	2500	7650	9	398	398	16279
:35:33	10	2850	1150	1140	2510	7650	8	401	401	24330
:36:39	20	2840	1180	1130	2510	7660	8	401	401	32391
:37:45	10	2880	1120	1150	2500	7650	7	396	396	40437
Tare		Asp Tare								

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
1	20.22	07:38:38 10/06/98	F	2

460 5

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

Customer
LORUSSO CORP.
3 BELCHER ST.
PLAINVILLE, MASS.
02762

Job
COMM. OF MASS.
DIST. 3 / CONTRACT # 9
RTE. 12 ASHBURNHAM

Cust# 1
Job# 2948
Truck# LC 544
Mix# 24
Name MODIFIED TOP 10% RAP
Operator
Ticket# 9437

Time	Agg T	AGG 3	AGG 5	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		2553	825	1464	3011			396		8249
7:39:51	-20	2560	850	1510	3010	7930	0	404	404	8334
7:40:37	20	2530	820	1430	3030	7810	7	391	391	16535
7:41:45	20	2540	840	1450	3040	7870	7	394	394	24799
7:42:52	10	2570	830	1480	3040	7920	8	401	401	33120
7:46:42	20	2530	810	1410	2950	7700	9	392	392	41212
7:47:49	0	2540	820	1470	3030	7860	8	395	395	49467
7:48:55	0	2560	770	1490	3000	7820	9	397	397	57684
7:50:00	20	2560	960	1480	3010	8010	9	401	401	66095

Agg Tare Asp Tare

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
4	105.09	07:50:53 10/06/98	F	2

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

stomer .	Job	Cust# 1
)RUSSO CORP.	COMM. OF MASS.	Job# 2948
BELCHER ST.	DIST. 3 / CONTRACT # 9	Truck# LC 542
AINVILLE, MASS.	RTE. 12 ASHBURNHAM	Mix# 24
2762		Name MODIFIED TOP 10% RAP
		Operator
		Ticket# 9438

Time	Agg T	AGG 3	AGG 5	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		2553	825	1464	3011			396		8249
7:51:33	-20	2620	890	1500	3010	8020	6	395	395	8415
7:52:19	0	2550	800	1460	3020	7830	9	397	397	16642
7:54:11	0	2510	810	1410	2990	7720	9	394	394	24756
7:55:17	10	2550	830	1440	3010	7830	9	394	394	32980
7:56:24	20	2530	780	1450	3020	7780	8	395	395	41155
7:57:29	20	2560	920	1480	3020	7980	8	402	402	49537
7:58:35	20	2570	860	1490	3020	7940	9	392	392	57869
7:59:42	0	2570	830	1510	3020	7930	10	397	397	66196

g Tare Asp Tare

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
5	138.19	08:00:35 10/06/98	F	2

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CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

Customer
LORUSSO CORP.
3 BELCHER ST.
PLAINVILLE, MASS.
02762

Job
COMM. OF MASS.
DIST. 3 / CONTRACT # 9
RTE. 12 ASHBURNHAM

Cust# 1
Job# 2948
Truck# LC 750
Mix# 24
Name MODIFIED TOP 10% RAP
Operator
Ticket# 9439

Time	Agg T	AGG 3	AGG 5	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		2476	800	1420	2920			384		8000
8:01:25	-20	2420	860	1350	2870	7500	6	384	384	7884
8:02:10	10	2470	810	1400	2920	7600	9	383	383	15867
8:03:32	20	2490	770	1450	2900	7620	9	384	384	23871
8:04:38	30	2510	870	1400	2940	7720	9	384	384	31975
8:05:45	20	2500	840	1450	2940	7730	9	382	382	40087
8:06:50	30	2500	810	1450	2900	7660	9	384	384	48131

Agg Tare Asp Tare

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
6	162.26	08:07:43 10/06/98	F	2

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CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

tomer	Job	Cust# 9999
SH SALE	DRIVEWAY MIX	Job# 9999
IST. ON FILE		Truck# 3
		Mix# 8
		Name BINDER MIX
		Operator
		Ticket# 9440

Time	Agg T	AGG 4	AGG 3	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		2812	1140	1140	2508			400		8000
:08:15	0	2750	1150	1070	2490	7460	9	404	404	7864
:09:03	10	2810	1160	1130	2500	7600	7	403	403	15867
:11:19	20	2840	1180	1170	2500	7690	7	398	398	23955
:12:25	0	2830	1180	1170	2580	7760	6	400	400	32115
:13:31	10	2880	1130	1170	2530	7710	6	401	401	40226
g Tare		Asp Tare								

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
2	40.33	08:14:24 10/06/98	F	2

9

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

Customer
LORUSSO CORP.
3 BELCHER ST.
PLAINVILLE, MASS.
02762

Job
COMM. OF MASS.
DIST. 3 / CONTRACT # 9
RTE. 12 ASHBURNHAM

Cust# 1
Job# 2948
Truck# LC 543
Mix# 24
Name MODIFIED TOP 10% RAP
Operator
Ticket# 9441

Time	Agg T	AGG 3	AGG 5	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		2476	800	1420	2920			384		8000
8:14:58	0	2420	770	1340	2860	7390	4	384	384	7774
8:15:43	20	2460	780	1420	2890	7550	6	382	382	15706
8:18:32	-10	2500	810	1450	2950	7710	7	383	383	23799
8:19:38	0	2520	740	1440	2950	7650	7	383	383	31832
8:20:44	0	2500	720	1430	2940	7590	7	383	383	39885
8:21:50	-10	2490	750	1360	2840	7440	7	383	383	47628
8:22:56	10	2430	780	1410	2910	7530	7	385	385	55543
8:24:02	0	2490	820	1450	2960	7720	6	382	382	63645

Agg Tare Asp Tare

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
7	194.08	08:24:55 10/06/98	F	2

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

stomer
DRUSSO CORP.
BELCHER ST.
LAIRVILLE, MASS.
2762

Job
COMM. OF MASS.
DIST. 3 / CONTRACT # 9
RTE. 12 ASHBURNHAM

Cust# 1
Job# 2948
Truck# LC 752
Mix# 24
Name MODIFIED TOP 10% RAP
Operator
Ticket# 9443

Time	Agg T	AGG 3	AGG 5	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		2476	800	1420	2920			384		8000
8:35:57	-20	2430	830	1380	2930	7570	0	387	387	7957
8:36:40	20	2490	800	1410	2950	7650	7	383	383	15990
8:37:47	10	2500	800	1420	2900	7620	7	382	382	23992
8:38:53	20	2470	830	1440	2900	7640	7	381	381	32013
8:39:59	20	2480	800	1430	2950	7660	7	384	384	40057
8:41:05	20	2480	800	1430	2940	7650	7	387	387	48094

g Tare Asp Tare

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
9	250.26	08:41:57 10/06/98	F	2

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

Customer
CHARGE SALE
ACCT.ON FILE

Job
MUNICIPAL PAVING

Cust# 8888
Job# 8888
Truck# 4
Mix# 67
Name SIDE WALK
Operator
Ticket# 9444

Time	Agg T	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		2000	4250			417		6667
8:42:36	-10	1950	4240	6190	4	415	415	6605
8:43:16	0	2010	4260	6270	3	421	421	13296
8:45:19	0	2030	4270	6300	4	418	418	20014

Agg Tare Asp Tare

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
1	10.01	08:46:13 10/06/98	F	2

12

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

stomer
DRUSSO CORP.
BELCHER ST.
AINVILLE, MASS.
2762

Job
COMM. OF MASS.
DIST. 3 / CONTRACT # 9
RTE. 12 ASHBURNHAM

Cust# 1
Job# 2948
Truck# LC 751
Mix# 24
Name MODIFIED TOP 10% RAP
Operator
Ticket# 9446

Time	Agg T	AGG 3	AGG 5	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		2476	800	1420	2920			384		8000
3:59:09	0	2510	800	1410	2970	7690	2	388	388	8078
3:59:52	50	2480	830	1400	2920	7630	6	384	384	16092
9:01:14	40	2500	800	1420	2900	7620	6	384	384	24096
9:02:21	40	2500	800	1420	2950	7670	6	381	381	32147
9:03:27	40	2490	780	1390	2880	7540	6	387	387	40074
9:04:33	30	2460	790	1450	2920	7620	6	383	383	48077

g Tare Asp Tare

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
11	307.22	09:05:26 10/06/98	F	2

13

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

Customer
LORUSSO CORP.
3 BELCHER ST.
PLAINVILLE, MASS.
02762

Job
COMM. OF MASS.
DIST. 3 / CONTRACT # 9
RTE. 12 ASHBURNHAM

Cust# 1
Job# 2948
Truck# LC 757
Mix# 24
Name MODIFIED TOP 10% RAP
Operator
Ticket# 9447

Time	Agg T	AGG 3	AGG 5	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		2476	800	1420	2920			384		8000
9:06:04	20	2500	820	1420	2910	7650	4	384	384	8034
9:06:48	40	2490	810	1460	2920	7680	6	384	384	16098
9:08:03	40	2490	830	1420	2930	7670	7	387	387	24155
9:09:10	10	2480	780	1460	2930	7650	7	383	383	32188
9:10:16	40	2450	770	1350	2860	7430	6	383	383	40001
9:11:22	40	2500	790	1390	2900	7580	7	379	379	47960

Agg Tare Asp Tare

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
12	331.20	09:12:14 10/06/98	F	2

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

omer
USSO CORP.
ELCHER ST.
TWVILLE, MASS.
62

Job
COMM OF MASS.
RTE 9
LEICESTER

Cust# 1
Job# 2959
Truck# PER
Mix# 18
Name STATE DENSE TOP
Operator
Ticket# 9449

Time	Agg T	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
arget		2524	4900			576		8000
25:56	0	2560	4890	7450	4	577	577	8027
26:30	40	2510	4880	7390	7	577	577	15994
28:33	10	2530	4920	7450	8	580	580	24024
29:39	40	2540	4930	7470	6	576	576	32070
30:45	50	2540	4900	7440	7	576	576	40086
31:51	40	2470	4860	7330	7	580	580	47996
Tare		Asp Tare						

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
2	48.12	09:32:45 10/06/98	F	2

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

Customer
CASH SALE
CUST. ON FILE

Job
DRIVEWAY MIX

Cust# 9999
Job# 9999
Truck# 3
Mix# 33
Name 3/8 TOP
Operator
Ticket# 9450

Time	Agg T	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		3936	4016			548		8500
9:34:54	0	3950	4070	8020	3	545	545	8565
9:35:28	40	3980	4050	8030	6	550	550	17145
9:36:35	40	3930	4030	7960	6	545	545	25650
9:37:41	50	3960	3970	7930	6	550	550	34130

Agg Tare Asp Tare

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
1	17.07	09:38:34 10/06/98	F	2

16

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

:omer
IUSSO CORP.
ELCHER ST.
IINVILLE, MASS.
62

Job
COMM. OF MASS.
DIST. 3 / CONTRACT # 9
RTE. 12 ASHBURNHAM

Cust# 1
Job# 2948
Truck# WAD
Mix# 24
Name MODIFIED TOP 10% RAP
Operator
Ticket# 9451

Time	Agg T	AGG 3	AGG 5	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		2476	800	1420	2920			384		8000
:39:10	30	2460	850	1380	2840	7530	8	386	386	7916
:39:54	50	2490	750	1410	2930	7580	7	380	380	15876
:41:38	60	2440	850	1410	2930	7630	8	380	380	23886
:42:44	40	2460	830	1430	2930	7650	8	386	386	31922
:43:50	30	2500	840	1440	2940	7720	9	382	382	40024
:44:56	50	2500	810	1450	2910	7670	8	387	387	48081

Tare Asp Tare

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
14	388.32	09:45:49 10/06/98	F	2

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

Customer
LORUSSO CORP.
3 BELCHER ST.
PLAINVILLE, MASS.
02762

Job
COMM. OF MASS.
DIST. 3 / CONTRACT # 9
RTE. 12 ASHBURNHAM

Cust# 1
Job# 2948
Truck# LC 541
Mix# 24
Name MODIFIED TOP 10% RAP
Operator
Ticket# 9453

Time	Agg T	AGG 3	AGG 5	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		2553	825	1464	3011			396		8249
9:53:27	10	2520	800	1400	3010	7730	7	402	402	8132
9:54:10	60	2540	810	1480	2990	7820	9	394	394	16346
9:55:59	40	2570	830	1490	3010	7900	10	393	393	24639
9:57:05	50	2560	860	1490	3020	7930	10	393	393	32962
9:58:11	50	2510	840	1500	3030	7880	10	399	399	41241
9:59:17	50	2570	810	1390	2970	7740	10	393	393	49374
10:00:24	30	2520	790	1440	2990	7740	10	394	394	57508
10:01:30	60	2540	820	1460	3040	7860	10	398	398	65766

Agg Tare Asp Tare

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
16	445.16	10:02:23 10/06/98	F	2

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

omer	Job	Cust# 1
USSO CORP.	COMM. OF MASS.	Job# 2948
ELCHER ST.	DIST. 3 / CONTRACT # 9	Truck# LC 542
INVILLE, MASS.	RTE. 12 ASHBURNHAM	Mix# 24
62		Name MODIFIED TOP 10% RAP
		Operator
		Ticket# 9455

Time	Agg T	AGG 3	AGG 5	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
arget		2553	825	1464	3011			396		8249
07:05	10	2520	850	1410	3010	7790	2	396	396	8186
07:50	50	2540	810	1460	3010	7820	9	395	395	16401
08:56	40	2560	850	1490	3020	7920	9	394	394	24715
10:03	30	2540	840	1480	2990	7850	9	398	398	32963
11:09	20	2610	830	1460	3040	7940	10	396	396	41299
12:15	50	2570	830	1440	3020	7860	9	400	400	49559
13:21	60	2550	810	1430	3000	7790	9	394	394	57743
14:27	40	2510	790	1410	3010	7720	9	395	395	65858
Tare		Asp Tare								

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
17	478.09	10:15:19 10/06/98	F	2

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CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

Customer
LORUSSO CORP.
3 BELCHER ST.
PLAINVILLE, MASS.
02762

Job
COMM. OF MASS.
DIST. 3 / CONTRACT # 9
RTE. 12 ASHBURNHAM

Cust# 1
Job# 2948
Truck# LC 542
Mix# 24
Name MODIFIED TOP 10% RAP
Operator
Ticket# 9458

Time	Agg T	AGG 3	AGG 5	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		2553	825	1464	3011			396		8249
10:27:16	10	2580	790	1390	2960	7720	5	396	396	8116
10:28:00	50	2600	840	1450	3030	7920	8	394	394	16430
10:29:23	40	2580	790	1500	3020	7890	9	393	393	24713
10:30:29	60	2560	850	1460	3070	7940	10	400	400	33053
10:31:35	60	2560	840	1470	3000	7870	9	394	394	41317
10:32:41	60	2580	850	1480	3080	7990	9	394	394	49701
10:33:48	50	2480	840	1510	2970	7800	9	398	398	57899
10:34:54	50	2570	790	1400	3010	7770	9	395	395	66064

Agg Tare Asp Tare

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
19	535.22	10:35:46 10/06/98	F	2

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CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

omer
USSO CORP.
ELCHER ST.
INVILLE, MASS.
52

Job
COMM. OF MASS.
DIST. 3 / CONTRACT # 9
RTE. 12 ASHBURNHAM

Cust# 1
Job# 2948
Truck# LC 36
Mix# 24
Name MODIFIED TOP 10% RAP
Operator
Ticket# 9459

Time	Agg T	AGG 3	AGG 5	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
arget		2476	800	1420	2920			384		8000
36:17	50	2460	800	1420	2880	7560	10	384	384	7944
37:06	70	2500	810	1420	2940	7670	10	389	389	16003
38:36	50	2490	790	1410	2870	7560	10	379	379	23942
39:42	30	2510	780	1440	2960	7690	11	384	384	32016
40:48	60	2480	790	1460	2910	7640	10	386	386	40042
41:54	50	2450	840	1360	2920	7570	10	387	387	47999
43:00	60	2480	780	1410	2930	7600	9	385	385	55984
44:07	60	2440	780	1460	3000	7680	9	382	382	64046
Tare		Asp Tare								

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
20	567.24	10:44:59 10/06/98	F	2

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Customer
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Job
COMM. OF MASS.
DIST. 3 / CONTRACT # 9
RTE. 12 ASHBURNHAM

Cust# 1
Job# 2948
Truck# LC 752
Mix# 24
Name MODIFIED TOP 10% RAP
Operator
Ticket# 9460

Time	Agg T	AGG 3	AGG 5	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		2476	800	1420	2920			384		8000
10:45:47	20	2500	790	1420	2950	7660	7	387	387	8047
10:46:31	50	2520	830	1450	2850	7650	10	378	378	16075
10:47:37	40	2420	790	1360	2950	7520	10	382	382	23977
10:48:43	60	2510	800	1400	3000	7710	10	389	389	32076
10:49:49	40	2450	790	1420	2850	7510	10	384	384	39970
10:50:55	60	2490	790	1420	2860	7560	9	384	384	47914

Agg Tare Asp Tare

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
21	591.20	10:51:47 10/06/98	F	2

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CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
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.omer
MUSSO CORP.
BELCHER ST.
.INVILLE, MASS.
'62

Job
COMM. OF MASS.
DIST. 3 / CONTRACT # 9
RTE. 12 ASHBURNHAM

Cust# 1
Job# 2948
Truck# R S
Mix# 24
Name MODIFIED TOP 10% RAP
Operator
Ticket# 9461

Time	Agg T	AGG 3	AGG 5	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		2553	825	1464	3011			396		8249
:01:06	20	2640	780	1510	3050	7980	3	396	396	8376
:02:39	60	2550	800	1420	2990	7760	12	394	394	16530
:03:57	60	2550	830	1470	3040	7890	12	394	394	24814
:05:04	60	2560	890	1490	2990	7930	12	399	399	33143
:06:10	30	2580	850	1500	3010	7940	11	394	394	41477
:07:16	60	2590	830	1460	3010	7890	11	397	397	49764
:08:23	60	2560	810	1510	2970	7850	10	394	394	58008
:09:28	60	2500	810	1510	2950	7770	10	395	395	66173
Tare		Asp Tare								

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
22	624.29	11:10:20 10/06/98	F	2

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Customer
LORUSSO CORP.
3 BELCHER ST.
PLAINVILLE, MASS.
02762

Job
COMM. OF MASS.
DIST. 3 / CONTRACT # 9
RTE. 12 ASHBURNHAM

Cust# 1
Job# 2948
Truck# LC 751
Mix# 24
Name MODIFIED TOP 10% RAP
Operator
Ticket# 9462

Time	Agg T	AGG 3	AGG 5	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		2476	800	1420	2920			384		8000
11:10:43	40	2460	790	1430	2900	7580	10	389	389	7969
11:11:40	60	2490	820	1420	2930	7660	9	382	382	16011
11:12:52	40	2490	810	1460	2910	7670	10	385	385	24066
11:13:58	40	2460	810	1430	2930	7630	10	382	382	32078
11:15:04	50	2510	810	1400	2960	7680	10	389	389	40147
11:16:10	50	2430	800	1380	2880	7490	9	383	383	48020

Agg Tare Asp Tare

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
23	648.30	11:17:02 10/06/98	F	2

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OLD COLDBROOK RD.
BARRE, MASS.
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.omer
:USSO CORP.
:ELCHER ST.
.INVILLE, MASS.
'62

Job
COMM. OF MASS.
DIST. 3 / CONTRACT # 9
RTE. 12 ASHBURNHAM

Cust# 1
Job# 2948
Truck# LC 757
Mix# 24
Name MODIFIED TOP 10% RAP
Operator
Ticket# 9463

Time	Agg T	AGG 3	AGG 5	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
'arget		2476	800	1420	2920			384		8000
17:56	30	2460	780	1450	2950	7640	7	386	386	8026
18:39	60	2470	790	1400	2900	7560	10	382	382	15968
19:46	40	2490	820	1420	2920	7650	10	385	385	24003
20:52	70	2460	860	1450	2910	7680	9	384	384	32067
21:58	50	2570	770	1360	2900	7600	9	384	384	40051
23:26	70	2420	750	1410	2950	7530	9	380	380	47961
Tare		Asp Tare								

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
24	672.28	11:24:18 10/06/98	F	2

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CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
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Customer
LORUSSO CORP.
3 BELCHER ST.
PLAINVILLE, MASS.
02762

Job
COMM. OF MASS.
DIST. 3 / CONTRACT # 9
RTE. 12 ASHBURNHAM

Cust# 1
Job# 2948
Truck# WE 7
Mix# 24
Name MODIFIED TOP 10% RAP
Operator
Ticket# 9464

Time	Agg T	AGG 3	AGG 5	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		2553	825	1464	3011			396		8249
11:25:00	30	2530	840	1520	3060	7950	7	396	396	8346
11:25:46	50	2560	810	1480	3000	7850	9	393	393	16589
11:27:16	60	2540	820	1480	2980	7820	9	399	399	24888
11:28:22	60	2580	830	1460	3020	7890	9	396	396	33094
11:29:29	60	2530	790	1430	3060	7810	9	397	397	41301
11:30:35	40	2550	800	1440	3070	7860	9	395	395	49556
11:31:42	60	2590	850	1480	2950	7870	9	400	400	57826
11:32:48	70	2510	810	1440	3050	7810	10	397	397	66033

Agg Tare Asp Tare

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
25	705.30	11:33:40 10/06/98	F	2

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CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
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omer	Job	Cust# 8888
RGE SALE	MUNICIPAL PAVING	Job# 8888
T.OW FILE		Truck# 4
		Mix# 33
		Name 3/8 TOP
		Operator
		Ticket# 9465

Time	Agg T	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
arget		3473	3544			484		7501
34:20	50	3520	3600	7120	7	484	484	7604
34:59	60	3510	3760	7270	7	482	482	15356
36:05	70	3540	3510	7050	8	486	486	22892
37:12	80	3510	3560	7070	6	484	484	30446
Tare		Asp Tare						

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
2	24.24	11:38:04 10/06/98	F	2

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CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
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Customer
LORUSSO CORP.
3 BELCHER ST.
PLAINVILLE, MASS.
02762

Job
COMM OF MASS.
RTE 9
LEICESTER

Cust# 1
Job# 2959
Truck# BRN
Mix# 16
Name STATE DENSE TOP
Operator
Ticket# 9466

Time	Agg T	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		2524	4900			576		8000
11:39:11	40	2510	4880	7390	4	576	576	7966
11:39:47	90	2550	4830	7380	7	574	574	15920
11:40:52	80	2550	5070	7620	8	574	574	24114
11:41:59	80	2540	4880	7420	9	580	580	32114
11:43:05	110	2470	4830	7300	8	577	577	39991
11:44:11	100	2510	4850	7360	9	574	574	47925
Agg Tare		Asp Tare						

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
3	72.08	11:45:04 10/06/98	F	2

MB

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CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

ıner	Job	Cust# 1
ISSO CORP.	COMM. OF MASS.	Job# 2948
:LCHER ST.	DIST. 3 / CONTRACT # 9	Truck# WAD
:NVILLE, MASS.	RTE. 12 ASHBURNHAM	Mix# 24
;2		Name MODIFIED TOP 10% RAP
		Operator
		Ticket# 9468

'ime	Agg T	AGG 3	AGG 5	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
ırget		2476	800	1420	2920			384		8000
;2:31	50	2480	800	1410	2890	7580	10	386	386	7966
;3:19	40	2420	780	1440	2990	7630	10	384	384	15980
;5:22	50	2520	830	1430	2880	7660	10	379	379	24019
;6:28	70	2520	770	1340	2840	7470	10	387	387	31876
;7:34	70	2550	800	1420	2980	7750	10	388	388	40014
;8:41	70	2570	800	1450	2970	7790	11	382	382	48186
Tare		Asp Tare								

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
27	753.50	11:59:33 10/06/98	F	2

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
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Customer
LORUSSO CORP.
3 BELCHER ST.
PLAINVILLE, MASS.
02762

Job
COMM. OF MASS.
DIST. 3 / CONTRACT # 9
RTE. 12 ASHBURNHAM

Cust# 1
Job# 2948
Truck# LC 541
Mix# 24
Name MODIFIED TOP 10% RAP
Operator
Ticket# 9469

Time	Agg T	AGG 3	AGG 5	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		2553	825	1464	3011			396		8249
12:00:01	40	2560	820	1480	3060	7920	13	399	399	8319
12:00:55	40	2480	850	1450	3120	7900	11	395	395	16614
12:02:09	40	2640	820	1460	2930	7850	11	400	400	24864
12:03:16	70	2490	810	1500	2990	7790	11	393	393	33047
12:04:21	90	2520	800	1410	2990	7720	11	394	394	41161
12:05:28	90	2600	840	1450	2980	7870	10	397	397	49428
12:06:33	80	2560	860	1520	3030	7970	9	395	395	57793
12:07:40	60	2510	840	1420	3010	7780	10	394	394	65967

Agg Tare Asp Tare

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
28	786.48	12:08:46 10/06/98	F	2

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
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ɔmer	Job	Cust# 9999
ł SALE	DRIVEWAY MIX	Job# 9999
ſ. ON FILE		Truck# 3
		Mix# 33
		Name 3/8 TOP
		Operator
		Ticket# 9470

Time	Agg T	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
ırget		926	945			129		2000
15:24	40	940	1100	2040	3	129	129	2169
ſare		Asp Tare						

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
2	18.15	12:15:38 10/06/98	F	2

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Customer
LORUSSO CORP.
3 BELCHER ST.
PLAINVILLE, MASS.
02762

Job
COMM. OF MASS.
DIST. 3 / CONTRACT # 9
RTE. 12 ASHBURNHAM

Cust# 1
Job# 2948
Truck# LC 750
Mix# 24
Name MODIFIED TOP 10% RAP
Operator
Ticket# 9471

Time	Agg T	AGG 3	AGG 5	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		2476	800	1420	2920			384		8000
12:37:48	30	2610	800	1450	3030	7890	6	390	390	8280
12:38:40	70	2560	790	1440	2960	7750	14	378	378	16408
12:39:46	90	2480	800	1390	2910	7580	13	383	383	24371
12:40:52	80	2480	790	1410	2910	7590	13	384	384	32345
12:41:58	70	2480	790	1400	2950	7620	13	384	384	40349
12:43:05	70	2680	790	1460	3060	7990	14	381	381	48720

Agg Tare Asp Tare

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
29	810.84	12:43:57 10/06/98	F	2

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
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omer
USSO CORP.
ELCHER ST.
INVILLE, MASS.
62

Job
COMM. OF MASS.
DIST. 3 / CONTRACT # 9
RTE. 12 ASHBURNHAM

Cust# 1
Job# 2948
Truck# LC ~~543~~ 542
Mix# 24
Name MODIFIED TOP 10% RAP
Operator
Ticket# 9472

Time	Agg T	AGG 3	AGG 5	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
arget		2476	800	1420	2920			384		8000
46:43	30	2480	800	1390	2930	7600	8	384	384	7984
47:34	60	2460	790	1430	2910	7590	13	383	383	15957
48:42	70	2490	780	1410	2860	7540	12	381	381	23878
49:46	70	2420	800	1440	2890	7550	12	384	384	31812
50:52	50	2540	870	1420	2890	7720	11	382	382	39914
51:58	70	2470	760	1370	2870	7470	11	385	385	47769
53:10	40	2410	790	1410	2900	7510	11	383	383	55662
54:16	50	2550	780	1420	2930	7680	10	384	384	63726
Tare		Asp Tare								

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
30	842.70	12:55:09 10/06/98	F	2

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CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

Customer
LORUSSO CORP.
3 BELCHER ST.
PLAINVILLE, MASS.
02762

Job
COMM. OF MASS.
DIST. 3 / CONTRACT # 9
RTE. 12 ASHBURNHAM

Cust# 1
Job# 2948
Truck# LC 543
Mix# 24
Name MODIFIED TOP 10% RAP
Operator
Ticket# 9473

Time	Agg T	AGG 3	AGG 5	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		2476	800	1420	2920			384		8000
12:57:36	30	2460	790	1440	2920	7610	5	384	384	7994
12:58:18	50	2520	790	1440	2950	7700	11	383	383	16077
12:59:25	70	2530	800	1360	2890	7580	10	383	383	24040
1:00:32	60	2530	770	1460	2910	7670	10	384	384	32094
1:01:38	50	2420	840	1420	2930	7610	9	382	382	40086
1:02:44	70	2490	870	1430	2970	7760	9	384	384	48230
1:03:50	50	2470	720	1460	2920	7570	10	386	386	56186
1:04:56	70	2440	780	1420	2930	7570	9	385	385	64141

Agg Tare Asp Tare

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
31	874.77	13:05:48 10/06/98	F	2

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
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USSO CORP.
ELCHER ST.
INVILLE, MASS.
62

Job
COMM. OF MASS.
DIST. 3 / CONTRACT # 9
RTE. 12 ASHBURNHAM

Cust# 1
Job# 2948
Truck# LC 36
Mix# 24
Name MODIFIED TOP 10% RAP
Operator
Ticket# 9474

Time	Agg T	AGG 3	AGG 5	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
arget		2476	800	1420	2920			384		8000
08:27	40	2460	790	1390	2890	7530	4	385	385	7915
09:10	60	2490	810	1420	2930	7650	10	381	381	15946
10:17	60	2470	780	1420	2920	7590	10	380	380	23916
11:23	70	2510	790	1450	2910	7660	9	394	394	31970
12:30	60	2500	820	1410	2920	7650	10	387	387	40007
13:35	70	2480	780	1360	2880	7500	10	387	387	47894
14:42	70	2420	790	1400	2930	7540	10	388	388	55822
15:48	70	2450	820	1450	2910	7630	10	386	386	63839
Tare		Asp Tare								

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
32	906.69	13:16:40 10/06/98	F	2

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CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

Customer
LORUSSO CORP.
3 BELCHER ST.
PLAINVILLE, MASS.
02762

Job
COMM. OF MASS.
DIST. 3 / CONTRACT # 9
RTE. 12 ASHBURNHAM

Cust# 1
Job# 2948
Truck# LC 752
Mix# 24
Name MODIFIED TOP 10% RAP
Operator
Ticket# 9475

Time	Agg T	AGG 3	AGG 5	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		2476	800	1420	2920			384		8000
1:18:45	30	2510	800	1440	2950	7700	5	386	386	8086
1:19:30	60	2510	810	1420	2990	7730	11	380	380	16196
1:20:37	50	2470	780	1380	2850	7480	10	381	381	24057
1:21:42	50	2470	770	1430	2890	7560	11	383	383	32000
1:22:48	80	2490	830	1430	2940	7690	11	383	383	40073
1:23:55	70	2460	800	1420	2900	7580	10	386	386	48039

Agg Tare Asp Tare

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
33	930.71	13:24:47 10/06/98	F	2

ASPHALT PLANT D
BARRE, MA
RUN #2

FRANK PHOENIX
Date: 10-6-98
TRUCKS NOT SAMPLED

ruck ID	— COMPUTER TIME — START	STOP	TRUCK #	MIX #	TICKET #	TICKET PRINTED CLOCK TIME	POUNDS ~~TONS~~ BATCH TOTAL
A	7:04	7:11:34	# 1	24	9432	7:12	66,058
B	8:25:35	8:33:52	LC 36	24	9442	8:34	64257
C	8:50:03	8:57:24	RS	24	9445	8:58	65,832
D	9:16:34	9:23:55	1	24	9448	9:24	66,158
E	10:02:47	10:03:39	3	8	9454	10:05	10,145
F	10:17:12	10:22:19	LC 750	24	9456	10:23	48,203
G	10:23:50	10:25:41	4	33	9457	10:26	18,034
H	11:45:35	11:51:06	SG 22	24	9467	11:52	48217
→ I	13:33:17	13:38:26	LC 757	24	9476	13:39	48480
	[illegible]						
	6:[illegible]		LC [illegible]	24	9450		70[illegible]
SAND	12:[illegible]		2	0	[illegible]		[illegible]
TK	1[illegible]		3	33	[illegible]		[illegible]
EST	1[illegible]		2	33	[illegible]		[illegible]
	15:[illegible]9	[illegible]	3	[illegible]	[illegible]		[illegible]

A

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2932

Customer
LORUSSO CORP.
3 BELCHER ST.
PLAINVILLE, MASS.
02762

Job
LORUSSO CORP.
VARIOUS CONTRACTS

Cust# 1
Job# 7777
Truck# 1
Mix# 24
Name MODIFIED TOP 10% RAP
Operator
Ticket# 9432

Time	Agg T	AGG 3	AGG 5	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		2553	825	1464	3011			396		8249
7:04:13	-20	2570	840	1510	3070	7990	6	401	401	8391
7:04:57	-10	2560	850	1470	3060	7940	13	391	391	16722
7:06:03	20	2570	830	1450	3020	7870	14	398	398	24990
7:07:09	10	2520	800	1400	2980	7700	14	396	396	33086
7:08:15	10	2540	780	1510	3090	7920	14	398	398	41404
7:09:22	-10	2530	760	1470	2950	7710	13	395	395	49509
7:10:28	20	2560	870	1520	3000	7950	13	395	395	57854
7:11:34	-20	2590	800	1430	2990	7810	13	394	394	66058

Agg Tare Asp Tare

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
1	33.03	07:12:25 10/06/98	F	2

William Fowler
MND
7:12 am

B ~~10~~

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

mer
SSO CORP.
LCHER ST.
NVILLE, MASS.
2

Job
COMM. OF MASS.
DIST. 3 / CONTRACT # 9
RTE. 12 ASHBURNHAM

Cust# 1
Job# 2948
Truck# LC 36
Mix# 24
Name MODIFIED TOP 10% RAP
Operator
Ticket# 9442

ime	Agg T	AGG 3	AGG 5	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
rget		2476	800	1420	2920			384		8000
5:35	-30	2460	730	1410	2910	7510	3	385	385	7895
6:21	-10	2500	940	1460	2950	7850	6	385	385	16130
8:22	-20	2490	780	1430	2920	7620	7	385	385	24135
9:27	0	2420	760	1370	2920	7470	7	386	386	31991
0:33	0	2480	850	1410	2900	7640	7	385	385	40016
1:39	10	2480	810	1420	2890	7600	7	383	383	47999
2:46	20	2480	920	1460	2940	7800	6	383	383	56182
3:52	-10	2510	840	1430	2910	7690	7	385	385	64257
are		Asp Tare								

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
8	226.21	08:34:44 10/06/98	F	2

Ex1 + Ex3 → YES TO TTE

P15, P16, P9 → PTE

Ex2, C9, C12

C

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

Customer
LORUSSO CORP.
3 BELCHER ST.
PLAINVILLE, MASS.
02762

Job
COMM. OF MASS.
DIST. 3 / CONTRACT # 9
RTE. 12 ASHBURNHAM

Cust# 1
Job# 2948
Truck# R S
Mix# 24
Name MODIFIED TOP 10% RAP
Operator
Ticket# 9445

Time	Agg T	AGG 3	AGG 5	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		2553	825	1464	3011			396		8249
8:50:03	0	2530	810	1450	2970	7760	-1	400	400	8160
8:50:47	40	2580	820	1450	2990	7840	6	391	391	16391
8:51:54	0	2540	840	1490	3010	7880	5	395	395	24666
8:53:00	40	2560	830	1470	3030	7890	6	393	393	32949
8:54:07	10	2550	750	1480	3030	7810	6	397	397	41156
8:55:12	40	2560	820	1510	3030	7920	6	395	395	49471
8:56:19	10	2510	830	1390	2950	7680	6	393	393	57544
8:57:24	50	2560	840	1480	3010	7890	7	398	398	65832

Agg Tare Asp Tare

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
10	283.18	08:58:17 10/06/98	F	2

Cy1 + Cy3 → YTB → TTC

P15, P16, P9 → PTE

Cy2, C9, C12

D

A

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

›mer	Job	Cust# 1
ISSO CORP.	COMM. OF MASS.	Job# 2948
ELCHER ST.	DIST. 3 / CONTRACT # 9	Truck# 1
INVILLE, MASS.	RTE. 12 ASHBURNHAM	Mix# 24
52		Name MODIFIED TOP 10% RAP
		Operator
		Ticket# 9448

Time	Agg T	AGG 3	AGG 5	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		2553	825	1464	3011			396		8249
16:34	0	2550	830	1520	3090	7990	3	402	402	8392
17:19	40	2520	750	1500	2990	7760	10	395	395	16547
18:25	20	2550	800	1490	3000	7840	10	394	394	24781
19:31	40	2560	800	1460	3030	7850	11	395	395	33026
20:37	30	2570	840	1500	3050	7960	10	394	394	41380
21:43	10	2580	780	1500	3070	7930	10	394	394	49704
22:49	30	2560	840	1490	2980	7870	11	400	400	57974
23:55	40	2570	840	1400	2980	7790	11	394	394	66158
Tare		Asp Tare								

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
13	364.28	09:24:47 10/06/98	F	2

E

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

Customer
CASH SALE
CUST. ON FILE

Job
DRIVEWAY MIX

Cust# 9999
Job# 9999
Truck# 3
Mix# 8
Name BINDER MIX
Operator
Ticket# 9454

Time	Agg T	AGG 4	AGG 3	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		1758	713	713	1568			250		5002
10:02:47	30	1750	760	740	1580	4830	12	252	252	5082
10:03:39	50	1750	730	740	1590	4810	8	253	253	10145

Agg Tare Asp Tare

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
3	45.40	10:05:03 10/06/98	F	2

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

mer	Job	Cust# 1
SSO CORP.	COMM. OF MASS.	Job# 2948
LCHER ST.	DIST. 3 / CONTRACT # 9	Truck# LC 750
NVILLE, MASS.	RTE. 12 ASHBURNHAM	Mix# 24
2		Name MODIFIED TOP 10% RAP
		Operator
		Ticket# 9456

ime	Agg T	AGG 3	AGG 5	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
rget		2476	800	1420	2920			384		8000
7:12	10	2460	800	1490	2920	7670	3	387	387	8057
7:54	40	2550	800	1490	2930	7770	9	384	384	16211
9:00	50	2480	840	1460	2950	7730	9	383	383	24324
0:06	50	2440	790	1360	2850	7440	10	382	382	32146
1:12	20	2470	800	1410	2920	7600	9	384	384	40130
2:19	20	2510	800	1400	2980	7690	9	383	383	48203
are		Asp Tare								

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
18	502.19	10:23:11 10/06/98	F	2

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

Customer
CHARGE SALE
ACCT.ON FILE

Job
MUNICIPAL PAVING

Cust# 8888
Job# 8888
Truck# 4
Mix# 33
Name 3/8 TOP
Operator
Ticket# 9457

Time	Agg T	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		2778	2835			387		6000
10:23:50	30	2780	2820	5600	7	389	389	5989
10:24:28	60	2820	2850	5670	7	387	387	12046
10:25:41	60	2790	2810	5600	7	388	388	18034

Agg Tare Asp Tare

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
1	9.02	10:26:35 10/06/98	F	2

H

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

ıner	Job	Cust# 1
ISSO CORP.	COMM. OF MASS.	Job# 2948
LCHER ST.	DIST. 3 / CONTRACT # 9	Truck# 5G 22
NVILLE, MASS.	RTE. 12 ASHBURNHAM	Mix# 24
2		Name MODIFIED TOP 10% RAP
		Operator
		Ticket# 9467

'ime	Agg T	AGG 3	AGG 5	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
rget		2476	800	1420	2920			384		8000
5:35	80	2520	760	1410	2960	7650	13	385	385	8035
6:35	90	2510	810	1450	2910	7680	10	379	379	16094
7:48	80	2540	830	1470	2950	7790	10	381	381	24265
8:55	70	2480	840	1400	2900	7620	10	386	386	32271
0:01	50	2440	780	1410	2900	7530	10	384	384	40185
1:06	60	2480	840	1400	2930	7650	9	382	382	48217
'are		Asp Tare								

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
26	729.41	11:51:59 10/06/98	F	2

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

Customer
LORUSSO CORP.
3 BELCHER ST.
PLAINVILLE, MASS.
02762

Job
COMM. OF MASS.
DIST. 3 / CONTRACT # 9
RTE. 12 ASHBURNHAM

Cust# 1
Job# 2948
Truck# LC 757
Mix# 24
Name MODIFIED TOP 10% RAP
Operator
Ticket# 9476

Time	Agg T	AGG 3	AGG 5	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		2476	800	1420	2920			384		8000
1:33:17	30	2460	790	1460	2970	7680	5	388	388	8068
1:34:01	60	2500	780	1390	2900	7570	11	382	382	16020
1:35:07	80	2440	720	1410	2940	7510	10	382	382	23912
1:36:13	90	2460	900	1410	2920	7690	10	384	384	31986
1:37:19	90	2480	820	1430	3170	7900	10	384	384	40270
1:38:26	50	2420	880	1440	3090	7830	10	380	380	48480

Agg Tare Asp Tare

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
34	~~954.95~~	13:39:18 10/06/98	F	2

987.98

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

ner	Job	Cust# 1
SSO CORP.	COMM. OF MASS.	Job# 2948
LCHER ST.	DIST. 3 / CONTRACT # 9	Truck# LC 757
NVILLE, MASS.	RTE. 12 ASHBURNHAM	Mix# 24
2		Name MODIFIED TOP 10% RAP
		Operator
		Ticket# 9430

ime	Agg T	AGG 3	AGG 5	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
rget		2476	800	1420	2920			384		8000
9:06	0	2480	720	1410	2920	7510	7	385	385	7895

are Asp Tare

Cost/Ton Percent Tax Load Cost Amount Tax Dest Charge Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
0	0.00	06:33:26 10/06/98	F	2

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355 2952

Customer
CASH SALE
CUST. ON FILE

Job
DRIVEWAY MIX

Cust# 9999
Job# 9999
Truck# 3
Mix# 8
Name BINDER MIX
Operator
Ticket# 9477

Time	Agg T	AGG 4	AGG 3	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		2461	998	990	2195			350		7002
1:58:05	50	2570	1030	1020	2130	6750	9	356	356	7106
1:58:55	100	2470	1020	990	2170	6650	15	353	353	14109

Agg Tare Asp Tare

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
4	52.45	13:59:50 10/06/98	F	2

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

ser
SALE
OR FILE

Job
DRIVEWAY MIX

Cust# 9999
Job# 9999
Truck# 3
Mix# 33
Name 3/8 TOP
Operator
Ticket# 9478

me	Agg T	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
get		3704	3780			516		8000
1:04	60	3710	3800	7510	12	516	516	8026
re		Asp Tare						

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
3	22.16	14:11:25 10/06/98	F	2

CENTRAL MASS. ASPHALT CO.
OLD CHEDDBROOK RD.
BARRE, MASS.
01005
508-355-2952

Customer
CASH SALE
CUST. ON FILE

Job
DRIVEWAY MIX

Cust# 9999
Job# 9999
Truck# 3
Mix# 33
Name 3/8 TOP
Operator
Ticket# 9479

Time	Agg T	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		3395	3465			473		7333
2:39:34	110	3380	3460	6840	14	471	471	7311
2:40:13	120	3400	3560	6960	20	471	471	14742
2:51:29	140	3440	3610	7050	16	472	472	22264

Agg Tare Asp Tare

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
4	33.29	14:52:22 10/06/98	F	2

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-255-2952

ter
SALE
. ON FILE

Job
DRIVEWAY MIX

Cust# 9993
Job# 9999
Truck# 3
Mix# 15
Name STATE TOP (TYPE I)
Operator
Ticket# 9481

ıme	Agg T	AGG 3	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
·get		1519	2736	3414			498		8167
3:55	70	1520	2780	3420	7720	7	500	500	8220
3:31	80	1530	2770	3450	7750	12	503	503	16473
3:38	100	1470	2690	3370	7530	10	499	499	24502
1:44	110	1500	2740	3440	7680	10	499	499	32681
2:50	90	1530	2720	3400	7650	11	496	496	40827
3:56	110	1510	2750	3450	7710	10	497	497	49034
ıre		Asp Tare							

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
1	24.52	15:24:49 10/06/98	F	2

1

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

Customer
LORUSSO CORP.
3 BELCHER ST.
PLAINVILLE, MASS.
02762

Job
COMM. OF MASS.
DIST. 3 / CONTRACT # 9
RTE. 12 ASHBURNHAM

Cust# 1
Job# 2948
Truck# WAD
Mix# 24
Name MODIFIED TOP 10% RAP
Operator
Ticket# 9433

Time	Agg T	AGG 3	AGG 5	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		2476	800	1420	2920			384		8000
7:13:07	-20	2480	730	1360	2920	7490	9	387	387	7877
7:13:57	0	2450	920	1410	2920	7700	13	386	386	15963
7:15:03	20	2470	860	1430	2920	7680	14	382	382	24025
7:16:09	20	2510	850	1450	2900	7710	12	381	381	32116
7:17:15	10	2480	760	1430	2940	7610	13	382	382	40108
7:18:22	-10	2490	770	1410	2950	7620	11	386	386	48114

Agg Tare Asp Tare

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
2	48.00	07:19:14 10/06/98	F	2

(12) MIX TEMP LOW WHEN THE ELEVATOR IS EMPTY (13) DRYER SHUT DOWN (14) DID NOT SAMPLE TRUCK [C]
(15) PORT CHANGE (16) NO COVER ON EXHAUST (17) TUNNEL SLOW TO SECURE (18) CAN'T COVER
EXHAUST (19) EXTENDED TEST 13:13 – 13:23 (2.4 ppm) (TRUCK W/O RAP)

Datasheet

ASPHALT PLANT D
BARRE, MA
RUN #3

FRANK PHOENIX
Date: 10-7-98

TRUCK COUNT	TEST TIME START	TEST TIME STOP	TRUCK # NO.	TYPE NO. MIX - TICKET #	°F MIX TEMP	°F STACK TEMP	POUNDS BATCH TOTAL	ASPH TEMP
1	6:36	6:43	BLK	16 - 9483	398	228	48,569	350
2	6:44	6:51	WAD	30 - 9484	391	233	48,358	315
(1) 3	6:52	7:00	WE 7	25 - 9485	411	255	66,121	315
4	7:01	7:09	LC 544	25 - 9486	408	241	66131	
(2) 5	7:11	7:20	COMO	25 - 9487	405	258	66248	
(3) 6	7:21	7:27	SG 22	25 - 9488	407	331	48289	
7	7:38	7:46	LC 36	25 - 9489	425	292	64,090	
) → 8	7:48	7:56	LC 543	25 - 9490	387	290	63,819	325/
9	8:07	8:10	4	60 - 9491	441	266	17,966	
10	8:11	8:19	RS	25 - 9493	414	299	65,939	340/
11	8:21	8:29	MAC	25 - 9494	421	280	65,934	340/
12	8:30	8:36	LC 753	25 - 9495	403	312	48.078	
13	8:38	8:44	LC 757	25 - 9496	406	304	48,082	330/
(6) 14	8:45	8:52	YOU	16 - 9497	401	321	47,966	
15	8:52	8:55	4	33 - 9498	398	318	20,123	
(5) 16	8:56	8:59	4	33 9499	396	319	20,005	
17	9:10	9:16	WAD	25 - 9500	253	129 (13)	48,237	
(7) → 18	9:53	10:07	WE 7	25 - 9501	147 (12)	88 (13)	65,744	320
19	10:13	10:24	LC 544	25 - 9502	267	136	66,394	
(9) 20	10:28	10:38	COMO	25 – 9503	419	290	66,071	310
(10) 21	10:39	10:45	SG 22	25 - 9504	408	280	48,222	
22	10:59	11:09	LC 36	25 - 9505	187 (12)	127	64,072	316
23	11:10	11:20	LC 543	25 - 9506	424	263	64,275	
→ 24	11:21	11:27	LC 754	25 - 9507	401	299	47,935	
25	11:31	11:40	RS	25 - 9509	409	299	66,241	320
) → 26	11:45	11:50	3	18 - 9511	357	368 ~~357~~	30,211	
) → 27	11:55	12:01	LC 753	25 - 9512	383	321	48,168	
) → 28	12:06	12:15	MAC	25 - 9513	PLANT DOWN	PLANT DOWN	66,025	305
29	12:23	12:31	4	33 - 9514	359	311	11,947	
30	12:32	12:40	LC 757	25 - 9515	401	349	48,124	
31	12:43	12:52	BLK	16 - 9516	394	350	47,996	
32	12:53	12:56	4	33 - 9517	381	340	20,069	
(8) 33	13:00	13:08	WE 7	25 - 9518	420	296	66665886	
(19) 34	13:09	13:13	3	2 - 9519	410	303	32,121	345
	END OF TEST							

(1) CAN'T COVER EXHAUST (2) EXHAUST STACKS TOO HIGH - EXHAUST INTO TTE (3) EXTENDED TEST
Barre Plant Data Sheets 7:27 – 7:36; EXHAUST NOT COMPLETELY SEALED FOR ——→ (4) PORT CHANGE
(5) EXTENDED TEST 8:59 – 9:09 (2.5 ppm) (6) TICKET TAKEN BY DRIVER (7) WAITING ON TRUCKS
(8) TRUCK W/O EXHAUST (9) TRUCK W/O EXHAUST (10) MISSED FIRST PART OF FIRST DUMP (11) EXTEND TEST
10:45 – 10:56 (1.9 ppm)

Asphalt Plant D
Barre, MA
Run # 3

Frank Phoenix
Date: 10-7-98
Trucks Not Sampled.

Truck ID	— Computer Time — Start	Stop	Truck #	Mix #	Ticket #	Ticket Printed Clock Time	Pounds Batch Total
A	6:26:38	6:32:08	LC 757	30	9482	6:28	48,137
B	7:58:16	8:04:48	LC 754	25	9491	8:05	48,486
C	11:26:45	11:27:22	4	60	9508	11:29	12,021
D	11:39:58	11:42:22	4	33	9510	11:43	20,160

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

:ower
RUSSO CORP.
BELCHER ST.
AINVILLE, MASS.
'62

Job
COMM OF MASS.
RTE 9
LEICESTER

Cust# 1
Job# 2959
Truck# BLK
Mix# 16
Name STATE DENSE TOP
Operator
Ticket# 9483

Time	Agg T	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
'arget		2524	4900			576		8000
35:39	40	2570	4910	7480	10	576	576	8056
36:13	70	2560	4920	7480	16	577	577	16113
37:19	70	2500	4860	7360	16	579	579	24032
39:25	80	2490	4870	7360	15	573	573	31985
39:31	50	2560	5190	7750	14	575	575	40319
41:03	70	2540	5140	7680	14	579	579	48569

Tare Asp Tare

Cost/Ton Percent Tax Load Cost Amount Tax Dest Charge Total Cost

Load#	Tons Total	Time & Date	Fob/Del	Location
1	24.26	06:[illegible]:50 10/07/98	F	2

[illegible]

Customer
[illegible] CORP.
[illegible] SELCHER ST.
[illegible]
[illegible]

[illegible]
[illegible]
[illegible]
[illegible]
[illegible]

Truck
[illegible]
Truck# [illegible]
[illegible]
Name [illegible]
Operator
Ticket# [illegible]

Time	Agg T	AGG [illegible]	AGG [illegible]	AGG [illegible]	AGG [illegible]	AGG [illegible]	Agg Total	Asp T	ASP A	[illegible]	[illegible]	Batch Total
Target		2700	800	740	500	2520			352			8000
6:43:36	70	2840	[illegible]	730	730	2480	[illegible]	11	353	373		8023
6:44:30	70	2870	[illegible]	760	820	[illegible]	[illegible]	17	350	[illegible]		16113
6:45:44	70	3010	816	750	830	2480	[illegible]	16	349	[illegible]		24342
6:46:51	40	2750	720	790	810	2520	[illegible]	16	353	[illegible]		32265
6:47:56	70	2760	780	730	794	2500	[illegible]	15	349	[illegible]		40134
6:49:03	50	2740	219	780	840	2500	[illegible]	16	354	[illegible]		48250
Agg Tare		Asp Tare										

Cost/Ton	Delivery Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Actual Location
[illegible]	[illegible]	[illegible]	F 2

2

[illegible] SAND, GRAVEL, ASPHALT [illegible]
[illegible] ARROW [illegible]
[illegible], MASS.
[illegible]
[illegible]

[illegible]	[illegible]	[illegible]
550 [illegible]	TOWN OF [illegible]	Job# 2[illegible]
[illegible]	VARIOUS STREETS	Truck# WL 7
[illegible] MASS.		[illegible] 25
[illegible]		[illegible] STATE TOP 10% RAP
		Operator
		Ticket# [illegible]

Time	Agg 1	AGG 3	AGG 5	AGG [illegible]	AGG [illegible]	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		1155	[illegible]	2568	3366			462		8250
[illegible]:55	30	1120	[illegible]	2490	3240	[illegible]	9	466	466	8196
[illegible]:45	50	1120	[illegible]	2450	3330	[illegible]	15	[illegible]	461	16417
[illegible]:51	60	1170	[illegible]	2540	3320	[illegible]	15	463	463	24750
[illegible]:58	60	1180	[illegible]	2540	3590	[illegible]	15	460	460	33290
[illegible]:04	70	1160	[illegible]	2530	3320	[illegible]	15	463	463	41543
[illegible]:11	60	1170	[illegible]	2510	3310	[illegible]	16	464	464	49797
7:17	70	1100	[illegible]	2440	3240	7610	15	464	464	57871
[illegible]:22	70	1180	800	2480	[illegible]	[illegible]	16	460	460	66121

[illegible] Asp Tare

[illegible] Percent [illegible] [illegible] Cost Amount Tax [illegible] Total Cost

[illegible] Ton [illegible] Time & Date [illegible] Location

[illegible] [illegible] 06:55[illegible] [illegible]

[illegible]
[illegible]
[illegible]
[illegible]
[illegible]

Customer	Job	[illegible]
LaRUSSO CORP.	TOWN OF [illegible]	Tck# [illegible]
3 BELCHER ST.	VARIOUS STREETS	Truck [illegible]
[illegible]VILLE, MASS		Mix# 25
[illegible]		Name [illegible]
		Operator
		Ticket# [illegible]

Time	Agg 1	AGG [illegible]	[illegible]	AGG 2	AGG 1	Agg Total	Asp T	ASP [illegible]	Asp Total	Batch Total
Target		[illegible]	[illegible]	2584	3300			462		8250
7:00:01	40	1170	930	2530	3330	7290	15	460	460	8340
7:00:46	80	1140	770	2570	2319	7790	15	466	466	16596
7:01:56	50	1150	610	2500	3340	7800	16	460	460	24856
7:03:02	30	1210	890	2550	3300	7950	16	460	460	33266
7:04:08	80	1090	770	2470	3220	7550	16	461	461	41277
7:05:14	90	1130	650	2480	3320	7830	15	462	462	49569
7:06:20	60	1150	820	2530	3270	7770	16	461	461	57800
7:07:26	50	1200	840	2530	3300	7870	16	461	461	66131

Agg Temp   Asp Temp

Cost/Ton Percent [illegible] Load Cost Amount Tax Dest Charge Total Cost

Load#	T[illegible] Total	Time & Date	Fob/Del Location
2	[illegible]	07:06:[illegible] [illegible] '96	F [illegible]

CENTRAL MASS. ASPHALT [illegible]
OLD COLDBROOK RD.
BARRE, MASS.
[illegible]
[illegible]

[illegible]	[illegible]	[illegible]
[illegible]	TOWN OF [illegible]	Job# [illegible]
[illegible] ST.	VARIOUS STREETS	Truck# [illegible]
[illegible]LE, MASS.		Mix# 25
		Name STATE TOP [illegible]
		Operator
		Ticket# 9487

[illegible]	Agg T	AGG 3	AGG 5	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
[illegible]		1155	825	2506	3302			462		8256
:13	40	1100	850	2470	3450	7670	9	464	464	8334
:56	70	1170	840	2480	3440	7530	14	460	460	16724
:03	40	1150	850	2520	3330	7850	14	464	464	25038
:09	70	1180	790	2540	3400	7910	14	463	463	33411
:15	70	1170	840	2520	3360	7890	13	461	461	41762
:21	70	1170	750	2520	3290	7730	14	461	461	49953
:27	60	1090	840	2430	3310	7670	14	461	461	58084
:33	80	1140	830	2490	3240	7700	13	464	464	66248

[illegible]re Asp Tare

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fab/Del Location
2	99.25	07:19:36 10/07/9[illegible]	F 2

6

[illegible] MASS. [illegible] CO.
OLD COLRROOK RT.
[illegible] MASS.
01069
[illegible]

Customer
[illegible] MASS.
[illegible] BELLHEW CT.
[illegible] MASS.
02762

Job
TOWN OF ELDING
VARIOUS STREETS

Customer #
Job# 3057
Truck# 56 25
Mix# 25
Name STATE TOP [illegible] ASP
Operator
Ticket# 3468

Time	Agg T	AGG 5	AGG 3	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		1120	800	2432	3200			449		8000
7:20:48	30	1130	810	2450	3210	7600	7	449	449	8049
7:21:30	40	1130	820	2470	3250	7670	13	446	446	16165
7:22:36	40	1140	810	2450	3210	7610	12	451	451	24226
7:23:43	60	1150	840	2430	3260	7690	12	446	446	32352
7:24:49	60	1050	870	2410	3160	7490	12	451	451	40293
7:25:55	60	1130	750	2420	3250	7550	12	446	446	48289

Agg Tare Asp Tare

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Loads	Job Total	Time & Date	Job/Del	Location
4	125.79	07:26:48 10/07/98	F	2

[illegible] CHESS, [illegible]
[illegible] LOW [illegible]
[illegible]
41065
[illegible] 355-2457

Cpr
SSP CORP.
LOWER ST.
NOVILF,MASS.
[illegible]

Job
TOWN OF SPRING
[illegible] STREETS

Costs 1
Job# 3457
Truck# [illegible]
Mix# 25
Name STATE [illegible]
Operator
Ticket# 9407

ime	Agg 7	AGG 3	AGG 5	AGG 2	AGG 1	Agg Total	Asp T	ASP	Asp Total	Batch Total
rget		1120	860	2432	3200			446		8009
7:08	20	1140	860	2460	3160	7620	7	450	450	8070
7:49	50	1140	790	2440	3210	7580	13	450	450	16100
9:01	50	1100	820	2380	3160	7460	13	447	447	24007
0:07	50	1110	830	2430	3160	7530	12	448	448	31985
1:13	60	1130	750	2440	3200	7500	13	446	446	39931
2:19	60	1120	810	2460	3240	7630	12	450	450	48011
3:25	70	1140	790	2430	3200	7560	11	449	449	56620
4:31	70	1110	840	2460	3210	7620	11	450	450	64090
ate		Asp Tare								

Cost/Ton Percent Tax Loss Cost Amount Tax Base Charge Total Cost

Loads	Job Total	Time & Date	Pub/Pvt
5	195.44	07:45:25 10/07/96	P

[illegible] MASS. ACCOUNT NO.
OLD COLONY RD.
RANGE,MASS.
0:00
[illegible]

Customer
[illegible] CORP.
3 BELCHER ST.
PLAINVILLE,MASS
02762

Job
COMP. OF MASS.
DIST. 3 ' CONTRACT [illegible]
RTE. 12 [illegible]

Truck [illegible]
Truck 2943
Driver LC [illegible]
Job # [illegible]
Name STATE TOT [illegible]
Operator
Tickets [illegible]

Time	Agg 1	AGG 2	AGG 3	AGG 2	AGG 1	Agg Total	Asp 1	Asp 2	Asp Total	Batch Total
Target		1120	800	2432	3200			448		8000
7:45:52	30	1070	800	2330	3210	7470	13	442	[illegible]	7912
7:46:43	30	1120	820	2400	3180	7530	10	451	[illegible]	15883
7:48:43	40	1130	810	2460	3230	7630	10	447	[illegible]	23960
7:49:49	30	1140	760	2470	3230	7600	10	447	[illegible]	32087
7:50:55	60	1150	810	2430	3220	7610	10	448	[illegible]	40065
7:52:01	50	1140	730	2360	3200	7430	11	447	[illegible]	47942
7:53:07	50	1070	800	2420	3180	7470	10	451	[illegible]	55863
7:54:13	60	1110	740	2460	3200	7510	10	446	446	63819
Agg Tare		Asp Tare								

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Post Charge	Total Cost

Loads	Tons Total	Time / Date	Sub Div Location
1	[illegible]	[illegible]	[illegible]

[illegible]
[illegible]
[illegible]
[illegible]
[illegible]

[illegible] — [illegible] — Date [illegible]
[illegible] DATE — [illegible] PAVING — Job# 6888
[illegible] FILE — Truck# 4

Mix# 60
Name [illegible]
Operator
Ticket# 94[illegible]

Time	Agg 3	AGG 2	AGG 1	Agg Total	Asp [illegible]	ASP A	Asp Total	Batch Total
rget		[illegible]	2500			372		[illegible]
[illegible]:10	30	3[illegible]	[illegible]	5070	1[illegible]	370	370	[illegible]
[illegible]:50	50	3070	[illegible]450	5520	[illegible]	373	373	[illegible]
3:21	50	3110	2500	5660		[illegible]73	373	[illegible]966

[illegible] Asp Tare

Cost/Ton Percent Ta. Load Cost Amount Ta. Rest Charge Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
1	[illegible].98	08:09:17 10/07 9[illegible]	F	2

1C

[illegible] MASS. [illegible]
SLP COLLEGEDON RD.
[illegible],MASS.
[illegible]
[illegible]

[illegible]
[illegible]
[illegible] FELCHER ST.
[illegible]
[illegible]

[illegible]
TOWN OF [illegible]
VARIOUS STREET

Cust# 1
Job# [illegible]
Truck# [illegible]
Rte# 25
Name STATE TOW [illegible]
Operator
Ticket# [illegible]

Time	Agg T [illegible]	[illegible]	AGG 5	AGG 2	AGG 1	Agg Total	Asp T ASP A		Asp Total	Batch Total
Target		1155	825	2500	3340			462		8250
8:10:03	20	1130	830	2520	3300	7800	6	460	460	8260
8:10:47	50	1090	840	2540	3300	7770	8	462	462	16492
8:12:10	50	1140	850	2540	3290	7820	9	460	460	24780
8:13:24	50	1170	760	2450	3250	7630	8	463	463	32873
8:14:30	60	1100	780	2480	3260	7620	9	460	460	40953
8:15:36	60	150	870	2510	3360	7890	8	464	464	49307
8:16:42	60	1170	780	2540	3290	7780	8	461	461	57548
8:17:49	30	1170	900	2520	3340	7930	7	461	461	65939

Agg Time Asp Time

Cost/Ton	[illegible]	Load Cost	Amount [illegible]	Post Charge	Total Cost

Check	Job Total	[illegible] Date	Foreman Location
	317.55	08/[illegible]/88	F 2

[illegible]
[illegible]
[illegible]
[illegible]
[illegible]

[illegible]	Job	Customer [illegible]
[illegible] 100%	100% OF EROSION	Job# 3057
[illegible]	MAPIGUS STREETS	Truck# MAC
[illegible]		Mix# 25
[illegible]		Name STATE 10P 10% RAP
		Operator
		Ticket# [illegible]

[illegible]me	Asp T AGG 3	AGG 5	AGG 2	AGG 1	Agg Total	Asp T ASP A	Asp Total	Batch Total
[illegible]get	1155	825	2500	3300		462		8250
[illegible]:26 [illegible]	1150	840	2530	3310	7630	6 455	455	8285
[illegible]:09 50	1100	830	2440	3260	7630	8 465	465	16300
[illegible]:08 50	1160	830	2510	3310	7810	9 465	465	24655
[illegible]:15 70	1180	810	2530	3320	7850	9 465	465	32970
[illegible]:20 50	1150	840	2530	3299	7810	9 459	459	41239
[illegible]:27 [illegible]	1180	840	2540	3323	7880	9 462	462	49581
[illegible]:33 50	1170	860	2530	3280	7840	9 462	462	57883
[illegible]:39 30	1100	800	2450	3240	7590	8 461	461	65934

[illegible]te Asp Tare

[illegible]ost/Ton Percent Tax Load Cost Amount Tax Dest Charge Total Cost

[illegible]	Job Total	Time & Date	Fob/Del	Location
[illegible]	275.62	08:28:3[illegible] 10/07/98	F	2

12

[illegible] MASS. ASPHALT
OLD FOXBORO RT.
BAPPA, MASS.
01165
508-355-2900

Customer
LONGSSO CORP.
3 BELCHER ST.
PLAINVILLE, MASS.
02762

Job
TOWN OF FRAMING
VARIOUS STREETS

Contr 1
Job 3057
Truck# LC 753
Mix# 25
Name STATE TOP 15% PAP
Operator
Ticket# 9495

Time	Agg T	AGG 3	AGG 5	AGG 2	AGG 1	Agg Total	Asp T	ASP 4	Asp Total	Batch Total
Target		1120	800	2432	3200			440		8000
8:29:27	20	1130	770	2420	3220	7540	6	446	446	7980
8:30:09	60	1140	810	2440	3230	7620	8	453	453	16059
8:31:30	20	1120	770	2460	3210	7560	10	449	449	24068
8:32:35	40	1130	860	2430	3200	7620	8	444	444	32132
8:33:42	50	1080	790	2490	3150	7510	8	446	446	40088
8:34:48	40	1110	780	2470	3180	7540	9	450	450	48078

Agg Tare Asp Tare

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Best Charge	Total Cost

Load#	Job Total	Time & Date	Top/Bel	Location
9	269.66	08:35:41 10/07/95	F	2

13

CLIFFORD MOSS, ASPHALT CO.
OLD CONCORD RD.
BARRE, MASS.
01005
508-355-2352

MASS
ASSO CORP.
LONER ST.
NVILLE, MASS.
2

Job
TOWN OF ERVING
VARIOUS STREETS

Cust# 1
Job# 3857
Truck# LC 757
Mix# 25
Name STATE TOP 10% ASP
Operator
Ticket# 9496

me	Agg 1	AGG 3	AGG 5	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
rget		1120	800	2432	3290			448		8000
6:22	20	1140	840	2440	3250	7670	7	446	446	8116
7:03	50	1120	780	2430	3220	7550	8	450	450	16116
8:55	20	1120	810	2470	3230	7630	9	448	448	24194
0:02	40	1160	820	2420	3210	7610	9	450	450	32254
1:08	50	1090	750	2380	3150	7370	9	448	448	40072
2:14	50	1110	810	2430	3210	7560	9	450	450	48082

are Asp Tare

Cost/Ton Percent Tax Load Cost Amount Tax Dest Charge Total Cost

Load#	Job Total	Time & Date	Job/Del	Location
10	293.70	08:43:07 10/07/90	F	2

14

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE,MASS.
01005
508-355-2952

Customer
CORUSSO CORP.
3 BELCHER ST.
PLAINVILLE,MASS.
02762

Job
COMM OF MASS.
RTE 9
LEICESTER

Cust# 1
Job# 2959
Truck# YOU
Mix# 16
Name STATE DENSE TOP
Operator
Ticket# 9497

Time	Agg T	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		2524	4900			576		8000
8:43:45	30	2550	4920	7470	8	567	567	8037
8:44:26	50	2540	4920	7460	6	579	579	16676
8:46:08	40	2550	4860	7410	6	579	579	24065
8:47:13	60	2520	4900	7420	5	575	575	32060
8:48:19	50	2480	4830	7310	5	578	578	39948
8:49:26	50	2530	4910	7440	5	578	578	47966

Agg Tare Asp Tare

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
2	48.26	08:50:19 10/07/98	F	2

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

ıer	Job	Cust# 8888
;E SALE	MUNICIPAL PAVING	Job# 8888
ON FILE		Truck# 4
		Mix# 33
		Name 3/8 TOP
		Operator
		Ticket# 3498

ıme	Agg T	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
rget		3087	3150			430		6667
::03	20	3090	3170	6260	4	427	427	6687
::22	50	3100	3180	6280	5	430	430	13397
::47	40	3100	3200	6300	6	426	426	20123

ıre Asp Tare

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	For/Del	Location
1	10.06	09:54:42 10/07/98	F	2

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2[illegible]

ustomer
CHARGE SALE
ACCT.ON FILE

Job
MUNICIPAL PAVING

Cost# 8668
Job# 8066
Truck# 4
Mix# 33
Name 3/8 TOP
Operator
Ticket# 9499

Time	Agg T	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		3087	3150			430		6667
8:55:24	20	3030	3170	6200	6	429	429	6629
8:55:59	50	3090	3180	6270	6	433	433	13332
8:57:39	50	3100	3140	6240	7	433	433	20005

Agg Tare Asp Tare

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
2	20.06	08:58:34 10/07/98	F	2

CENTRAL MASS. ASPHALT CO.
OLD COLLBROOK RD.
BARRE, MASS.
01005
508-355-2752

Job
TOWN OF SPRING
VARIOUS STREETS

Cust# 1
Job# 3057
Truck# WAD
Mix# 25
Name STATE TOP 10% RAT
Operator
Ticket# 9500

Time	Agg T	AGG 3	AGG 5	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
9:00		1120	800	2432	3200			440		8000
9:59	20	1180	790	2422	3180	7490	4	446	446	7936
9:38	50	1140	810	2440	3190	7580	9	450	450	15966
9:45	30	1130	800	2440	3230	7600	9	446	446	24012
9:51	30	1130	810	2450	3200	7590	8	449	449	32051
9:57	40	1130	810	2440	3240	7620	8	450	450	40121
10:03	50	1150	830	2470	3220	7670	8	446	446	48237

Tare Asp Tare

Cost/Ton Percent Tax Load Cost Amount Tax Dest Charge Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
11	317.82	09:15:57 10/07/90	F	2

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2352

Customer
[illegible] CORP.
[illegible] BEECHER ST.
PLATTSVILLE, MASS.
[illegible]

Job
TOWN OF ELVING
VARIOUS STREETS

Cust# 1
Job# 3957
Truck# WE 7
Mix# 25
Name STATE TOP 10% RAP
Operator
Ticket# 9501

Time	Agg T	AGG 3	AGG 2	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		1155	825	2508	3300			462		8250
9:57:55	10	1160	830	2510	3250	7750	6	458	458	8208
9:58:36	20	1110	790	2440	3240	7580	14	462	462	16250
9:59:42	50	1130	810	2530	3360	7830	13	464	464	24544
10:00:51	40	1160	820	2510	3290	7780	15	460	460	32784
10:01:56	60	1170	820	2490	3300	7780	13	462	462	41026
10:03:01	30	1150	840	2530	3270	7790	12	460	460	49276
10:04:07	30	1100	820	2500	3300	7800	12	461	461	57537
10:05:14	50	1170	810	2460	3300	7740	12	467	467	65744

Agg Tare Asp Tare

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
12	350.69	10:06:06 10/07/98	F	2

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2552

ner	Job	Cust# 1
SSO CORP.	TOWN OF ERVING	Job# 3857
LCNER ST.	VARIOUS STREETS	Truck# LC 544
NVILLE, MASS.		Mix# 25
2		Name STATE TOP 10% RAP
		Operator
		Ticket# 9502

ime	Agg T	AGG 3	AGG 5	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
rget		1155	825	2508	3300			462		8250
4:12	10	1120	840	2520	3300	7780	7	458	458	8238
4:54	20	1150	810	2550	3310	7820	13	464	464	16522
6:00	30	1140	840	2490	3320	7790	12	464	464	24776
7:06	50	1170	830	2540	3280	7820	12	464	464	33060
8:13	30	1110	830	2540	3300	7780	13	458	458	41298
9:18	30	1340	830	2470	3320	7960	14	462	462	49720
1:09	40	1270	820	2490	3310	7890	13	462	462	58072
2:15	50	1190	840	2510	3320	7860	14	462	462	66394
are		Asp Tare								

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Jon Total	Time & Date	Fab/Del	Location
13	383.89	10:23:24 10/07/98	F	2

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2852

Customer
LORUSSO CORP.
3 BELCHER ST.
PLAINVILLE, MASS.
02762

Job
TOWN OF ERVING
VARIOUS STREETS

Cust# 1
Job# 3097
Truck# CCMO
Mix# 29
Name STATE TOP 10% RAP
Operator
Ticket# 9503

Time	Agg T	AGG 3	AGG 5	AGG 2	AGG 1	agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		1155	825	2508	2306			462		8250
10:29:15	10	1250	810	2500	3310	7870	6	462	462	8332
10:30:03	30	1220	820	2510	3300	7850	14	468	468	16650
10:31:09	50	1170	820	2530	3260	7780	14	462	462	24832
10:32:15	60	1170	840	2530	3320	7860	14	464	464	33216
10:33:21	40	1110	800	2460	3260	7630	14	463	463	41309
10:34:27	50	1150	830	2490	3320	7790	14	462	462	49561
10:35:33	60	1180	810	2530	3340	7860	14	462	462	57883
10:36:39	60	1160	830	2470	3270	7730	15	458	458	66071

Agg Tare Asp Tare

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
14	416.93	10:37:31 10/07/98	F	2

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01065
508-355-2952

wer	Job	Cust# 1
SSO CORP.	TOWN OF ERVING	Job# 3857
LCHER ST.	VARIOUS STREETS	Truck# 56 22
NVILLE, MASS.		Mix# 25
2		Name STATE TOP 10% RAP
		Operator
		Ticket# 9504

ime	Agg T	AGG 3	AGG 5	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
rget		1120	800	2432	3200			448		8000
3:00	30	1130	820	2460	3320	7730	17	445	445	8175
3:51	50	1130	790	2450	3140	7510	15	447	447	16132
3:20	70	1080	790	2400	3320	7590	15	449	449	24171
1:25	80	1120	800	2410	3170	7500	14	448	448	32119
2:32	70	1140	790	2460	3320	7710	15	448	448	40277
3:38	80	1120	790	2470	3120	7500	16	445	445	48222

ire Asp Tare

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
15	441.04	10:44:30 10/07/98	F	2

12

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

Customer
LORUSSO CORP.
3 BELCHER ST.
PLAINVILLE, MASS.
02762

Job
TOWN OF ERVING
VARIOUS STREETS

Cust# 1
Job# 3057
Truck# LC 36
Mix# 25
Name STATE TOP 10% RAP
Operator
Ticket# 9505

Time	Agg T	AGG 3	AGG 5	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		1120	800	2432	3200			448		8000
10:59:37	40	1140	800	2430	3160	7530	10	453	453	7983
11:00:22	90	1140	820	2430	3300	7690	17	449	449	16122
11:01:28	60	1080	790	2370	3170	7410	17	448	448	23980
11:02:34	90	1100	810	2420	3170	7500	17	450	450	31930
11:03:40	70	1120	810	2440	3330	7700	17	449	449	40079
11:04:46	70	1140	800	2430	3130	7500	17	444	444	48023
11:05:53	90	1140	800	2470	3160	7570	17	452	452	56045
11:06:58	140	1120	790	2460	3210	7580	17	447	447	64072

Agg Tare Asp Tare

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
16	473.08	11:07:51 10/07/96	F	2

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

mer	Job	Cost# 1
SSO CORP.	TOWN OF ERVING	Job# 3057
LCHER ST.	VARIOUS STREETS	Truck# LC 543
NVILLE, MASS.		Mix# 25
2		Name STATE TOP 10% RAP
		Operator
		Ticket# 9506

ime	Agg T	AGG 3	AGG 5	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
rget		1120	800	2432	3200			448		8000
0:23	60	1110	800	2400	3320	7630	12	445	445	8075
1:11	80	1090	800	2410	3170	7470	18	451	451	15996
2:18	90	1160	790	2470	3350	7770	18	451	451	24217
3:23	90	1110	830	2450	3150	7540	18	446	446	32203
4:30	80	1140	800	2380	3170	7490	18	446	446	40139
5:36	70	1070	780	2400	3200	7450	17	449	449	48038
6:42	80	1140	780	2460	3250	7630	17	449	449	56117
7:48	90	1130	810	2480	3290	7710	17	448	448	64275
are		Asp Tare								

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
17	505.22	11:18:41 10/07/98	F	2

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

Customer
LORUSSO CORP.
3 BELCHER ST.
PLAINVILLE, MASS.
02762

Job
TOWN OF ERVING
VARIOUS STREETS

Cust# 1
Job# 3057
Truck# LC 754
Mix# 25
Name STATE TOP 10% RAP
Operator
Ticket# 9507

Time	Agg T	AGG 3	AGG 5	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		1120	800	2432	3200			448		8000
11:20:06	40	1150	810	2470	3230	7660	13	446	446	8106
11:20:48	80	1120	790	2430	3120	7460	17	450	450	16016
11:21:53	60	1090	790	2370	3330	7580	17	448	448	24044
11:23:00	80	1110	820	2440	3140	7510	17	445	445	31999
11:24:06	60	1120	770	2440	3220	7550	17	447	447	39996
11:25:12	70	1140	800	2430	3120	7490	18	449	449	47935

Agg Tare Asp Tare

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
18	529.19	11:26:04 10/07/98	F	2

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

ser
SSO CORP.
CHER ST.
VILLE, MASS.
2

Job
TOWN OF ERVING
VARIOUS STREETS

Cust# 1
Job# 3057
Truck# R S
Mix# 25
Name STATE TOP 10% RAP
Operator
Ticket# 9509

me	Agg T	AGG 3	AGG 5	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
get		1155	825	2508	3300			462		8250
:07	40	1150	820	2530	3260	7760	11	463	463	8223
:49	50	1170	810	2560	3270	7910	17	462	462	16495
:55	80	1160	890	2510	3310	7870	17	463	463	24828
:01	80	1170	810	2470	3440	7890	17	462	462	33180
:07	60	1150	800	2500	3270	7720	17	463	463	41363
:13	60	1120	820	2500	3300	7740	17	462	462	49565
:19	80	1300	840	2510	3330	7980	18	459	459	58004
:26	40	1090	830	2510	3340	7770	17	467	467	66241

re Asp Tare

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
19	562.31	11:39:18 10/07/98	F	2

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

Customer
CASH SALE
CUST. ON FILE

Job
DRIVEWAY

Cust# 9999
Job# 9999
Truck# 3
Mix# 18
Name STATE BINDER
Operator
Ticket# 9511

Time	Agg T	AGG 4	AGG 3	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		2625	844	844	2813			375		7501
11:45:26	40	2770	830	850	2950	7400	12	372	372	7772
11:46:13	70	2650	830	850	2920	7250	16	373	373	15395
11:47:19	50	2570	800	840	2770	6980	17	377	377	22752
11:48:25	40	2620	830	800	2830	7080	16	379	379	30211

Agg Tare Asp Tare

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
1	15.11	11:49:18 10/07/98	F	2

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

ner	Job	Cust# 1
SSO CORP.	TOWN OF ERVING	Job# 3057
LCHER ST.	VARIOUS STREETS	Truck# LC 756
NVILLE, MASS.		Mix# 25
2		Name STATE TOP 10% RAP
		Operator
		Ticket# 9512

me	Agg T	AGG 3	AGG 5	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
rget		1120	800	2432	3200			440		8000
3:56	30	1100	790	2440	3180	7510	10	443	443	7953
1:36	40	1110	780	2500	3160	7550	15	449	449	15952
5:42	70	1140	820	2470	3210	7640	15	449	449	24041
5:48	40	1120	800	2440	3220	7580	15	452	452	32073
7:54	70	1130	800	2440	3200	7570	15	448	448	40091
8:00	40	1140	810	2450	3230	7630	16	447	447	48168
ıre		Asp Tare								

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
20	586.39	11:59:53 10/07/98	F	2

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

Customer
LORUSSO CORP.
3 BELCHER ST.
PLAINVILLE, MASS.
02762

Job
TOWN OF ERVING
VARIOUS STREETS

Cust# 1
Job# 3057
Truck# MAC
Mix# 25
Name STATE TOP 10% RAP
Operator
Ticket# 9513

Time	Agg T	AGG 3	AGG 5	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		1155	825	2508	3300			462		8250
12:05:22	30	1150	820	2530	3290	7790	10	457	457	8247
12:06:03	50	1190	840	2500	3290	7820	16	466	466	16533
12:07:09	70	1120	820	2440	3250	7630	16	463	463	24626
12:08:14	60	1140	810	2460	3390	7820	16	462	462	32908
12:09:21	60	1170	820	2530	3260	7780	16	459	459	41147
12:10:27	80	1160	820	2530	3310	7820	16	464	464	49431
12:11:33	80	1170	820	2550	3330	7870	16	465	465	57766
12:12:40	70	1150	810	2520	3320	7800	16	459	459	66025

Agg Tare Asp Tare

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
21	619.40	12:14:10 10/07/98	F	2

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01065
508-355-2552

ner	Job	Cust# 0888
GE SALE	MUNICIPAL PAVING	Job# 8888
ION FILE		Truck# 4
		Mix# 33
		Name 3/8 TOP
		Operator
		Ticket# 9514

me	Agg T	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
rget		2776	2835			387		6000
3:36	40	2730	2880	5610	12	382	382	5992
3:02	100	2740	2830	5570	19	385	385	11947

ire Asp Tare

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
4	36.11	12:29:57 10/07/98	F	2

CENTRAL MASS. ASPHALT CO
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

Customer
LORUSSO CORP.
3 BELCHER ST.
PLAINVILLE, MASS.
02762

Job
TOWN OF ERVING
VARIOUS STREETS

Cust# 1
Job# 3057
Truck# LC 757
Mix# 25
Name STATE TOP 10% RAP
Operator
Ticket# 9515

Time	Agg T	AGG 3	AGG 5	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		1120	800	2432	3200			448		8000
12:33:12	50	1120	790	2500	3310	7720	13	450	450	8170
12:33:59	90	1120	820	2430	3130	7500	18	450	450	16120
12:35:04	80	1150	820	2370	3180	7520	17	450	450	24090
12:36:10	50	1070	820	2410	3180	7480	17	446	446	32016
12:37:16	50	1100	810	2450	3240	7600	16	448	448	40064
12:38:22	80	1130	820	2460	3200	7610	16	450	450	48124

Agg Tare Asp Tare

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
22	643.46	12:39:15 10/07/98	F	2

31

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

ozer
USSO CORP.
ELCHER ST.
INVILLE, MASS.
52

Job
COMM OF MASS.
RTE 9
LEICESTER

Cust# 1
Job# 2959
Truck# BLK
Mix# 16
Name STATE DENSE TOP
Operator
Ticket# 9516

Time	Agg T	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
irget		2524	4900			576		8000
14:12	30	2510	4900	7410	12	570	570	7980
14:45	60	2560	4910	7470	15	579	579	16029
16:26	50	2550	4890	7440	15	578	578	24047
17:31	70	2530	4900	7430	15	577	577	32054
18:37	60	2540	4900	7440	15	572	572	40066
19:43	50	2460	4890	7350	14	580	580	47996
'are		Asp Tare						

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
3	72.26	12:50:37 10/07/98	F	2

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

Customer
CHARGE SALE
ACCT.ON FILE

Job
MUNICIPAL PAVING

Cust# 8885
Job# 8888
Truck# 4
Mix# 33
Name 3/8 TOP
Operator
Ticket# 9517

Time	Agg T	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		3087	3150			430		6667
12:52:39	20	3100	3150	6250	13	427	427	6677
12:53:08	40	3100	3150	6250	14	431	431	13358
12:54:41	60	3110	3170	6280	15	431	431	20069

Agg Tare Asp Tare

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
5	46.14	12:55:36 10/07/98	F	2

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

ner
SSO CORP.
CHER ST.
VILLE, MASS.
2

Job
TOWN OF ERVING
VARIOUS STREETS

Cust# 1
Job# 3057
Truck# WE 7
Mix# 25
Name STATE TOP 10% RAP
Operator
Ticket# 9518

ne	Agg T	AGG 3	AGG 5	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
get		1155	825	2508	3300			462		8250
3:07	20	1140	810	2500	3300	7750	16	464	464	8214
9:32	50	1150	790	2510	3310	7760	16	464	464	16438
9:47	50	1170	810	2490	3280	7750	15	461	461	24649
:52	50	1170	810	2540	3320	7840	16	464	464	32953
2:59	50	1170	820	2490	3290	7770	16	458	458	41181
1:05	40	1120	820	2460	3270	7670	15	462	462	49313
6:11	30	1160	810	2520	3320	7810	16	462	462	57585
:17	70	1160	840	2550	3290	7840	16	461	461	65886
re		Asp Tare								

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
23	676.40	13:07:10 10/07/98	F	2

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2552

Customer
CASH SALE
CUST. ON FILE

Job
DRIVEWAY MIX

Cust# 9999
Job# 9999
Truck# 3
Mix# 2
Name 1/2 BINDER
Operator
Ticket# 9519

Time	Agg T	AGG 3	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		2540	2700	2400			360		8000
1:08:08	20	2510	2700	2410	7620	13	356	356	7976
1:08:41	60	2810	2710	2410	7930	15	363	363	16269
1:09:53	60	2560	2730	2410	7700	15	361	361	24330
1:10:59	50	2460	2630	2340	7430	14	361	361	32121

Agg Tare Asp Tare

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
1	16.06	13:11:52 10/07/98	F	2

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

r
O CORP.
HER ST.
ILLE, MASS.

Job
TOWN OF ERVING
VARIOUS STREETS

Cust# 1
Job# 3057
Truck# LC 757
Mix# 30
Name STATE BINDER 10% RAP
Operator
Ticket# 9482

e	Agg T	AGG 4	AGG 5	AGG 3	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
et		2780	800	740	800	2520			352		9000
38	50	2860	730	750	810	2500	7650	11	349	349	7999
30	70	2820	800	760	790	2520	7690	20	349	349	16038
37	80	2700	750	780	840	2530	7600	21	351	351	23989
55	50	2870	770	760	860	2550	7610	20	355	355	32154
02	70	2740	760	710	770	2490	7470	19	351	351	39975
08	50	2770	940	750	850	2500	7810	18	352	352	48137

e Asp Tare

st/Ton Percent Tax Load Cost Amount Tax Dest Charge Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
1	24.07	06:33:02 10/07/98	F	2

B

GRATWICK, MASS. ASPHALT CO.
JOB COLDBROOK RD.
WARE, MASS.
01082
508-335-7452

Customer
LORUSSO CORP.
2 BELCHER ST.
PLAINVILLE, MASS.
02762

Job
TOWN OF GRATWICK
VARIOUS STREETS

Cust# 1
Job# 3857
Truck# LC 754
Mix# 25
Name STATE TOP 10% PAP
Operator
Ticket# 9491

Time	Agg T	AGG 3	AGG 5	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		1120	800	2432	3200			448		8000
7:58:15	20	1160	820	2470	3230	7680	3	450	450	8130
7:58:57	60	1140	790	2440	3150	7520	9	446	446	16096
8:00:19	40	1090	800	2390	3210	7490	10	447	447	24033
8:01:25	40	1120	900	2440	3170	7630	10	445	445	32108
8:02:32	20	1130	830	2470	3240	7670	11	451	451	40229
8:04:48	30	1360	820	2440	3190	7810	11	447	447	48486

Agg Tare Asp Tare

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Pob/Del	Location
6	279.66	08:05:40 13/07/90	F	2

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

ner
iE SALE
ON FILE

Job
MUNICIPAL PAVING

Cust# 8888
Job# 8888
Truck# 4
Mix# 60
Name PEOPLE'S TOP
Operator
Ticket# 9506

me	Agg T	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
get		3120	2508			372		6000
:45	40	3130	2530	5660	15	370	370	6030
:22	80	3070	2550	5620	16	371	371	12021

re Asp Tare

ost/Ton	Percent Tax	Load Cost	Amount Tax	Dest Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
2	14.99	11:28:43 10/07/98	F	2

CENTRAL MASS. ASPHALT CO.
OLD COLDBROOK RD.
BARRE, MASS.
01005
508-355-2952

Customer
CHARGE SALE
ACCT.ON FILE

Job
MUNICIPAL PAVING

Cust# 8888
Job# 8888
Truck# 4
Mix# 33
Name 3/8 TOP
Operator
Ticket# 9510

Time	Agg T	AGG 2	AGG 1	Agg Total	Asp T	ASP A	Asp Total	Batch Total
Target		3087	3150			430		5667
11:39:58	60	3110	3100	6210	16	430	430	5640
11:40:35	80	3050	3220	6270	15	429	429	13339
11:42:22	80	3110	3280	6390	15	431	431	20160

Agg Tare Asp Tare

Cost/Ton	Percent Tax	Load Cost	Amount Tax	Desc Charge	Total Cost

Load#	Job Total	Time & Date	Fob/Del	Location
3	30.14	11:43:16 10/07/98	F	2

3 Belcher St.
Plainville, MA 02762
Phone: (508) 695 3252 x 259
Fax: (508) 643 9411

Lorusso Corp.

Fax

To:	Ron Myers	**From:**	David J. LaFlamme
Fax:	(919) 541 1039	**Date:**	January 27, 2000
Phone:	(919) 541 5407	**Pages:**	2
Re:	Asphalt plant tickets	**CC:**	File

Urgent **X For Review** **Please Comment** **Please Reply** **Please Recycle**

•Comments:

Ron,

In our plants the following is standard: bin #1= sand, bin #2= 3/8" stone, bin #3= 1/2" stone, bin #4= 3/4" or 1-1/2" stone, bin #5= recycle asphalt and bin "A"= liquid asphalt.

On the ticket there can be 12 columns depending on the mix design, and they are as follows: column #1= batch time, c#2= aggregate scale tare weight, c#3=agg bin 4 net wgt. c#4= agg bin 5 net wgt., c#5= agg bin #3 net wgt., c#6= agg bin #2 net wgt., c#7= agg bin 1 net wgt., c#8= agg total, c#9= asphalt scale tare wgt., c#10= asphalt net wgt., c#11= asphalt total wgt., c#12= batch total cumulative weight.

Next on the ticket there can be several rows depending on load size, the first of which is: r#1= selected bins for use, r#2= Target scale weights, r#3= Actual weights achieved by bin and so on.

MIX DESIGNS	#10	24	25	30	MATERIAL
BIN 4	700			695	3/4" or 1-1/2" stone
BIN 5		200	200	200	RAP
BIN 3	225	617	280	187	1/2" stone
BIN 2	225	354	608	200	3/8" stone
BIN 1	750	728	800	630	sand
BIN A	100	101	112	88	Liquid Asphalt
	2,000	2,000	2,000	2,000	TOTAL POUNDS

01/27/00

I hope this information is helpful in answering any questions you may be confronted with regarding plant operations and ingredients within a given mix design. There are always variables in this process such as material weights per bin can change because of sieve analysis results of manufactured aggregates. Typically, these changes are minor in nature but they do occur periodically.

If I can be of any further assistance please do not hesitate to contact my office at (508) 695 3252 x259.

David J. LaFlamme

VP Engineering

:lamm, Scott

rom: RON MYERS [MYERS.RON@epamail.epa.gov]
ent: Thursday, February 10, 2000 7:41 AM
o: Klamm, Scott; frank.phoenix@pes.com
c: JOHNSON.MARY@epamail.epa.gov; LAMASON.BILL@epamail.epa.gov; TONEY.MIKE@epamail.epa.gov
ubject: Hot Mix Asphalt - Plant D Mix formulae

MX_DES-D.PDF ATT00001.txt

Frank/Scott

ttached is a FAX (in Acrobat PDF format) I received from Dave aflamme concerning the bin usages and Mix formulae used by 'ant D. I think this would almost satisfy the desire of some to etermine what was made during our test. Although the Mix esigns Dave has specifically listed comprise more than 80% of e production, to fully satisfy their desires we should add the sser used mixes. The following are other Mixes that are listed in able 3.1 of the PES test report. I have calculated the formulations er ton of total mix as Dave has on his FAX. All of this should be irt of one of the Appendices of the Plant D report.

n	Mix 24	Mix 2	Mix 8
	-	-	703
	200	-	-
	619	635	285
	355	675	285
	730	600	627
	96	90	100
ital	2,000	2,000	2,000

ı	Mix 16	Mix 15	Mix 33
	-	-	-
	-	-	-
	-	372	-
	631	670	926
	1225	836	945
	144	122	129
tal	2,000	2,000	2,000

ı	Mix 18	Mix 60	Mix 67
	700	-	-
	-	-	-
	225	-	-
	225	1040	600
	750	836	1275
	100	124	129
tal	2,000	2,000	2,000

TECHNICAL REPORT DATA

(Please read Instructions on reverse before completing)

1. REPORT NO EPA- 454/R-00-027	2	3 RECIPIENT'S ACCESSION NO
4. TITLE AND SUBTITLE Hot Mix Asphalt Plants Truck Loading Instrumental Methods Testing Asphalt Plant D Barre, Massachusetts		5 REPORT DATE May 2000 6 PERFORMING ORGANIZATION CODE
7 AUTHOR(S) EMAD		8. PERFORMING ORGANIZATION REPORT NO.
9. PERFORMING ORGANIZATION NAME AND ADDRESS U.S. Environmental Protection Agency Office of Air Quality Planning and Standards Research Triangle Park, NC 27711		10. PROGRAM ELEMENT NO. 11. CONTRACT/GRANT NO 68-D-98-027
12 SPONSORING AGENCY NAME AND ADDRESS Director Office of Air Quality Planning and Standards Office of Air and Radiation U.S. Environmental Protection Agency Research Triangle Park, NC 27711		13. TYPE OF REPORT AND PERIOD COVERED Final 14. SPONSORING AGENCY CODE EPA/200/04

15. SUPPLEMENTARY NOTES

16 ABSTRACT

The United States Environmental Protection Agency (EPA) is investigating hot mix asphalt plants to identify and quantify particulate matter and total hydrocarbon emissions from asphalt plant cement load-out operations. Testing was performed to characterize emissions from a total Temporary Enclosure (TTE). EPA issued a work assignment to Midwest Research Institute (MRI) to conduct an air emissions test program to collect data in support the investigation. The testing program was conducted through EPA Contract 68D98027, work assignment 2-04. In addition, manual samples were collected by Pacific Environmental Services, Inc. (PES). Work performed by PES was under a separate contract.

17. KEY WORDS AND DOCUMENT ANALYSIS

a. DESCRIPTORS	b. IDENTIFIERS/OPEN ENDED TERMS	c. COSATI Field/Group
Particulate Matter, THC		

18. DISTRIBUTION STATEMENT Release Unlimited	19. SECURITY CLASS *(Report)* Unclassified	21. NO. OF PAGES 246
	20 SECURITY CLASS *(Page)* Unclassified	22 PRICE

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